

CHUSKA ENERGY COMPANY

315 N. BEHREND • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 326-5525



March 9, 1990

DIVISION OF OIL, GAS & MINING

State of Utah Department of Natural Resources

Division of Oil, Gas and Mining
355 West North Temple
3 Triad Building, Suite 350

Salt Lake City, Utah 84180-1203

Ref: Application for Permit to Drill: Barnes 18M Well #1. San Juan County, Utah

Gentlemen

Attached for your examination and approval is the original and two copies of an Application for Permit to Drill the Barnes 18M Well No. 1 in San Juan County, Utah. This well will be drilled as part of an ongoing exploration program.

The location for this well falls outside the guidelines for the State of Utah spacing requirements. However, the topography of the area surrounding the desired location is such as to preclude the well being located in accordance with State requirements and yet remain in a position which will allow the well bore to penetrate geological structures which have been identified by seismic interpretation. We therefore apply for an exception to the General State Spacing requirements on topographic grounds. Chuska Energy controls the acreage surrounding the proposed site, as indicated on the attached land plat.

Please advise if you require additional information concerning this application. Chuska will greatly appreciate your prompt consideration.

Sincerely,

Donald S. Marnes Operations Manager

DSB/cswh File: C:\WP\CSWH\BARN18M1\UTAHCOVR

encl.

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	DIVISION OF	TI GAS AND M	ITNING		(.
DIVIDION OF OIL, GAS AND HILLIAN					5. Lease Designation and Serial No.
	•				NOG 8702-1116
A DDI ICATIONI	FOR PERMIT TO	DOUL DEEL	PEN OR	PILIC BAC	6. If Indian, Allottee or Tribe Name
	TOR TERMIT IN	J DRILL, DELL	LIT, OK	TEOO BAC	Navajo Tribal
1a. Type of Work DRILL	X	DEEPEN [PLUG BACK [7. Unit Agreement Name
b. Type of Well		DEAT		Multiple [3. Farm or Lease Name
	Other O	الماطالا	F (672)	Zone	~
2. Name of Operator		MU		1111	Barnes 18M
	ergy Company	_UL_uss	1.0.1000	עלי	
2. Address of Operator		MAK	12 1330		1
315 North	Behrend, Fari	mington, Ne	w Mexico	87401	10. Field and Pool, or Wildcat
4. Location of Well (Repor	location clearly and in a	cordance with and	Will Dements	.*)	Wildcat Anoth
At surface	801'	-sL, 1 068 6A		>	11. QQ, Sec., T., R., M., or 81k. and Survey or Area
44			-	3W≥W	and Joiney of Area
At proposed prod. zone	Same				S18 T40S R25E
14. Distance in miles and o	lirection from nearest towr	or post office*			12. County or Parrish 13. State
	•			•	San Juan Utah
15. Distance from proposed	•	16.	No. of acres in		No. of acres assigned to this well
location to nearest property or lease line.					to this well
(Also to nearest drig. li		19.	Proposed depth	20.	Rotary or cable tools
to nearest well, drilling or applied for, on this l		•	7,226' "	USSP F	Rotary
21. Elevations (Show wheth	er DF, RT, GR, etc.)				22. Approx. date work will start*
	4,826	' GR		· · · · · · · · · · · · · · · · · · ·	6-1-90
23.	المستشر المستشر	ROPOSED CASING A	ND CEMENTIN	G PROGRAM	
Size of Hole	Size of Casing	Weight per Foot	Setting	Depth	Quantity of Cement
12 1/4"	8 5/8"	24	lb	500′ 371	sx 'G' + 6% CaCl ₂
7 7/8"	5 1/2"	15.5-20	lb 7,	226' 764	sx 'G', 65:35 Poz + 6% Gel

Refer to attached 10-point Drilling Plan etc.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout p 2

).Ee	enter program, it any.
<u>:4.</u>	Title Operations Manager Date 3-9-90
	This space for Federal or State office use)
	APPROVED BY THE STATE
	OF UTAH DIVISION OF
-	Approved by OIL GAS AND MINING
	Conditions of approval, if any:
	BY John R. Days
	*See Instructions On Reverse Side WELL SPACING: Leng No. 17

COMPANY	CHUSKA ENERGY COMPANY			
LEASE	BARNES 18-M	_ WELL NO.	1	
	18 , T. 40 S			
	San Juan			
	801'FSL & 1108'FWL			
ELEVATION	4826	. •	r	

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SCALE : 1"= 1000"

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

	W E MANN FRE SEE SEE SEE SEE SEE SEE SEE SEE SEE S	Wi-Enll F	
SEAL:	#8466 #SURVING SURVING	WILLIAM E. MAHNKE II NEW MEXICO P.L.S. Nº 8466	
	SURVINE SURVINE	EYED	2

CHUSKA ENERGY COMPANY

10 POINT DRILLING PLAN

Barnes ISN Well No. 1 - chyd back to Barnes 18m # | 3-30-00

Section 18, Township 40S, Range 25E 796' FSL, 1323' FWL San Juan County, Utah

SURFACE FORMATION 1.

Geological name of surface formation: Morrison

2. ELEVATION

Surface elevation is 4,838' GR.

₹. ESTIMATED FORMATION TOPS

		<u>Sub Sea</u>
<u>Depth</u>	<u>Formation</u>	Elevation
		. 4070
Surface	Morrison	+ 4838'
9291	Navajo	+ 3909'
1619′	Chinle	+ 3219'
2659´	DeChelly	+ 2179'
2839 [*]	Organ Rock	+ 1999′
3534 <i>°</i>	Cedar Mesa	+ 1304'
46931	Hermosa	+ 145'
5508 ⁷	Upper Ismay	- 670′
56281	Lower Ismay	- 790 <i>°</i>
56981	Desert Creek	- 860' Primary Target
5818′	Akah	- 1010'
62981	Barker Creek	- 1460'
7138′	Mississippian	- 2300'
7238	Total Depth	- 24001
5508' 5628' 5698' 5818' 6298' 7138'	Upper Ismay Lower Ismay Desert Creek Akah Barker Creek Mississippian	- 670' - 790' - 860' Primary Targe - 1010' - 1460' - 2300'

PROPOSED CASING/CEMENTING PROGRAM 4.

	Depth	Size	Weight	<u>Grade</u>	Coupling
Surface Production:		8 5/8" 5 1/2"	24.0 ppf See detai		STC ram below

Detailed production string (5 1/2"):

<u>Interval</u>	Weig	ht Grac	e Coupline	1
0, -	40' 20.0	ppf L-8	O LTC	
40′ - 5,	,680° 15.5	ppf K-5	5 LTC	
5,660' - 6,	450 20.0	ppf L-8	O LTC	
$6,450^{\circ}-7$	238' 17.0	ppf K-5	5 LTC	

Surface Cementing:

371 sx (427 ft³) Class 'G' cement with 2% CaCl₂ and 1/4 lb/sk Celloflake. Weight = 15.8 ppg, yield = 1.15 ft³/sk. Slurry volume will be calculated at 100% excess over annular volume.

Production Cementing:

First Stage

TD to 4,000' (stage collar @ \pm 4,000'). Lead with 172 sx Class 'G' cement, 65:35 Pozmix, with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft³/sk. Tail with 100 sx Class 'G' cement with 2% CaCl₂. Weight = 15.8 ppg, yield = 1.15 ft³/sk. Total of 433 ft³.

Second Stage

4000' to surface. Lead with 393 sx Class 'G' cement, 65:35 Pozmix with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft/sk. \underline{Tail} with 100 sx Class 'G' cement with 2% \underline{CaCl}_2 . Weight = 15.8 ppg, yield = 1.15 ft²/sk. Total of 841 ft².

Note: Exact slurry volumes for the production string will be adjusted according to the caliper log which will be run prior to cementing. Special adjustments may be necessary if significant amounts of salt are drilled.

5. <u>BLOWOUT PREVENTER</u> (See attached schematics)

As abnormal pressure is not anticipated, a 2000 psi BOP system would be sufficient for the drilling of this well. However, due to availability constraints, a 3000 psi system will be used, as per the attached Exhibits "A" and "B". This will be a 10" \times 900 Series double ram preventer, equipped with a set of pipe and blind rams.

An accumulator system, with a pressure capacity sufficient to operate the rams three complete cycles without rig power, will be required as part of the rig equipment.

6. PROPOSED MUD PROGRAM

Surface to 3500'

Fresh water, gel, lime and native solids. Weight 8.3 - 8.7 ppg. Gel/lime sweeps as necessary for hole cleaning.

3500' to 5500'

Low solids, non-dispersed polymer system. Weight 8.6 - 8.8 ppg. Gel/lime sweeps as hole conditions dictate for hole cleaning. Fluid loss to be maintained at 15 cc or less. Fluid loss to be further reduced to 10 cc or less prior to coring, logging or DSTs.

5500' to TD

Saturated salt water, starch, salt gel. Weight 10.0-10.5 ppg, viscosity 35-40 sec/qt. Fluid loss to be maintained at 15 cc or less. Fluid loss to be further reduced to 10 cc or less prior to coring, logging or DSTs. Mud system to be fully converted and conditioned prior to drilling into the Akah at \pm 5800° .

7. AUXILIARY EQUIPMENT

- A. A kelly cock will be installed during drilling operations, with handle available on the rig floor.
- B. Floor (stabbing) valves will be available, on the rig floor at all times, with necessary subs to fit all of the drilling assemblies.
- C. Mud will be the circulating fluid. No abnormal formation pressures are expected.

a. WELL EVALUATION

Open hole electric logging program will consist of a minimum program of DLL-MSFL-SP-GR-Cal, FDC-CNL-GR-Lithodensity from TD to 4500'.

Drill stem testing will be as per the wellsite geologist's recommendations, based on shows. A mud logging unit will be utilized during drilling operations from 4000' to TD.

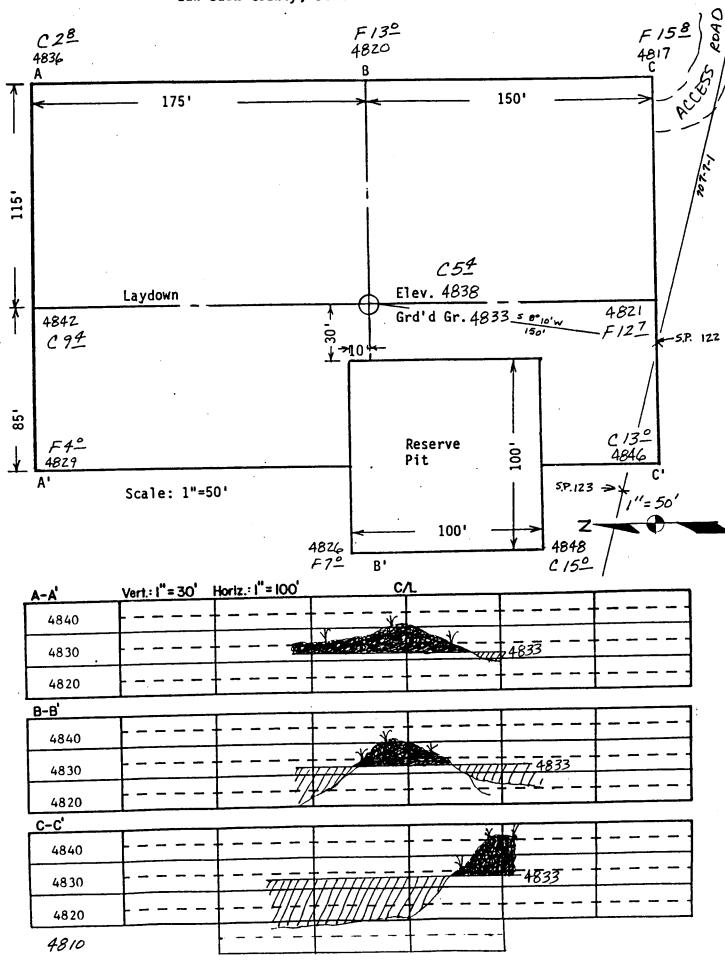
9. <u>ABNORMAL PRESSURES/GAS</u>

Abnormal pressures are not anticipated. Monitoring of gas and hydrocarbon shows will be by wellsite mud logging unit. $H_{\rm z}S$ gas is not anticipated, however regular checks will be made while drilling the well.

10. TIMING

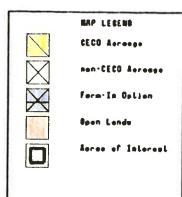
The drilling and evaluation of this well is estimated to be 23 days. Anticipated spud date is 6-1-90.

C' 'ca Energy Company Barnes #18-N-1 Section 18, T40S, R25E San Juan County, Utah

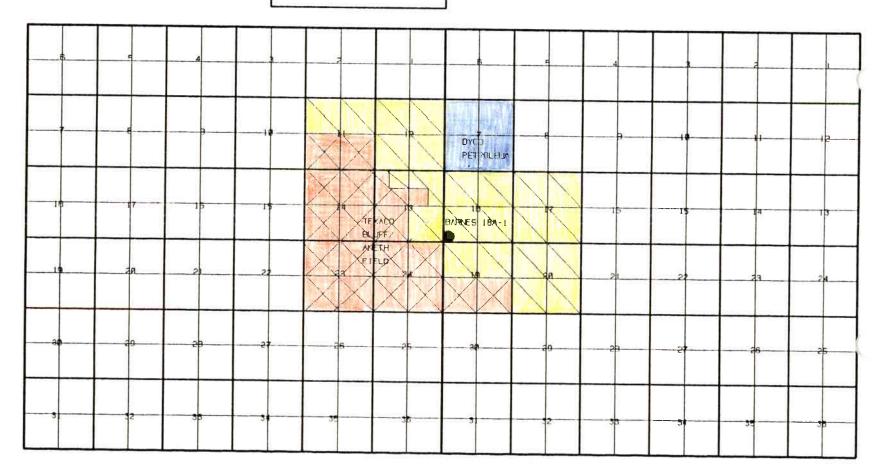


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T40S-R24E SAN JUAN COUNTY UTAH



T40S-R25E SAN JUAN COUNTY UTAH



CHUSKA ENERGY COMPANY

10 POINT DRILLING PLAN

Barnes 18M Well No. 1 Section 18, Township 40S, Range 25E 801' FSL, 1108' FWL San Juan County, Utah

1. SURFACE FORMATION

Geological name of surface formation: Morrison

2. ELEVATION

Surface elevation is 4,826' GR.

3. ESTIMATED FORMATION TOPS

		Sub Sea
<u>Deoth</u>	<u>Formation</u>	<u>Elevation</u>
Surface	Morrison	+ 4826
917'	Navajo	+ 3909'
1607'	Chinle	+ 3219'
2647'	DeChelly	+ 2179'
2827 ⁻	Organ Rock	+ 1999'
3522'	Cedar Mesa	+ 1304'
4681'	Hermosa	+ 145'
5496'	Upp er Ismay	- 670'
5616'	Lower Ismay	– 790 <i>°</i>
56861	Desert Creek	- 860' Primary Target
5836 <i>°</i>	Akah	- 1010'
62 86 ′	Barker Creek	- 1460'
7126'	Mississippian	- 2300 <i>°</i>
7226′	Total Depth	- 2400 <i>°</i>

4. PROPOSED CASING/CEMENTING PROGRAM

	Depth	Size	<u>Weight</u>	<u>Grade</u>	Coupling
Surface Production:		8 5/8" 5 1/2"	24.0 ppf See detai		STC ram below

Detailed production string (5 1/2"):

<u>Interval</u>	<u>Weight</u>	<u>Grade</u>	Coupling
0' - 40'	20.0 ppf	L-80	LTC
40' - 5,680'	15.5 ppf	K-55	LTC
5,680′ - 6,440′	20.0 ppf	L-80	LTC
6,440' - 7,226'	17.0 ppf	K-55	LTC

Surface Cementing:

371 sx (427 ft^3) Class 'G' cement with 2% CaCl₂ and 1/4 lb/sk Celloflake. Weight = 15.8 ppg, yield = 1.15 ft³/sk. Slurry volume will be calculated at 100% excess over annular volume.

Production Cementing:

First Stage

TD to 4,000' (stage collar @ \pm 4,000'). Lead with 246 sx Class 'G' cement, 65:35 Pozmix, with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft /sk. Tail with 100 sx Class 'G' cement with 2% CaCl₂. Weight = 15.8 ppg, yield = 1.15 ft /sk. Total of 570 ft .

Second Stage

4000' to surface. Lead with 318 sx Class 'G' cement, 65:35 Pozmix with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft/sk. Tail with 100 sx Class 'G' cement with 2% CaCl₂. Weight = 15.8 ppg, yield = 1.15 ft³/sk. Total of 703 ft³.

Note: Exact slurry volumes for the production string will be adjusted according to the caliper log which will be run prior to cementing. Special adjustments may be necessary if significant amounts of salt are drilled.

5. BLOWOUT PREVENTER (See attached schematics)

As abnormal pressure is not anticipated, a 2000 psi BOP system would be sufficient for the drilling of this well. However, due to availability constraints, a 3000 psi system will be used, as per the attached Exhibits "A" and "B". This will be a 10" x 900 Series double ram preventer, equipped with a set of pipe and blind rams.

An accumulator system, with a pressure capacity sufficient to operate the rams three complete cycles without rig power, will be required as part of the rig equipment.

6. PROPOSED MUD PROGRAM

Surface to 3500'

Fresh water, gel, lime and native solids. Weight 8.3 - 8.7 ppg. Gel/lime sweeps as necessary for hole cleaning.

3500' to 5500'

Low solids, non-dispersed polymer system. Weight 8.6 - 8.8 ppg. Gel/lime sweeps as hole conditions dictate for hole cleaning. Fluid loss to be maintained at 15 cc or less. Fluid loss to be further reduced to 10 cc or less prior to coring, logging or DSTs.

5500' to TD

Saturated salt water, starch, salt gel. Weight 10.0-10.5 ppg, viscosity 35-40 sec/qt. Fluid loss to be maintained at 15 cc or less. Fluid loss to be further reduced to 10 cc or less prior to coring, logging or DSTs. Mud system to be fully converted and conditioned prior to drilling into the Akah at \pm 5800'.

7. AUXILIARY EQUIPMENT

- A. A kelly cock will be installed during drilling operations, with handle available on the rig floor.
- B. Floor (stabbing) valves will be available, on the rig floor at all times, with necessary subs to fit all of the drilling assemblies.
- C. Mud will be the circulating fluid. No abnormal formation pressures are expected.

B. WELL EVALUATION

Open hole electric logging program will consist of a minimum program of DLL-MSFL-SP-GR-Cal, FDC-CNL-GR-Lithodensity from TD to 4500'.

Drill stem testing will be as per the wellsite geologist's recommendations, based on shows. A mud logging unit will be utilized during drilling operations from 4000' to TD.

9. ABNORMAL PRESSURES/GAS

Abnormal pressures are not anticipated. Monitoring of gas and hydrocarbon shows will be by wellsite mud logging unit. H_2S gas is not anticipated, however regular checks will be made while drilling the well.

10. TIMING

The drilling and evaluation of this well is estimated to be 23 days. Anticipated spud date is 6-1-90.

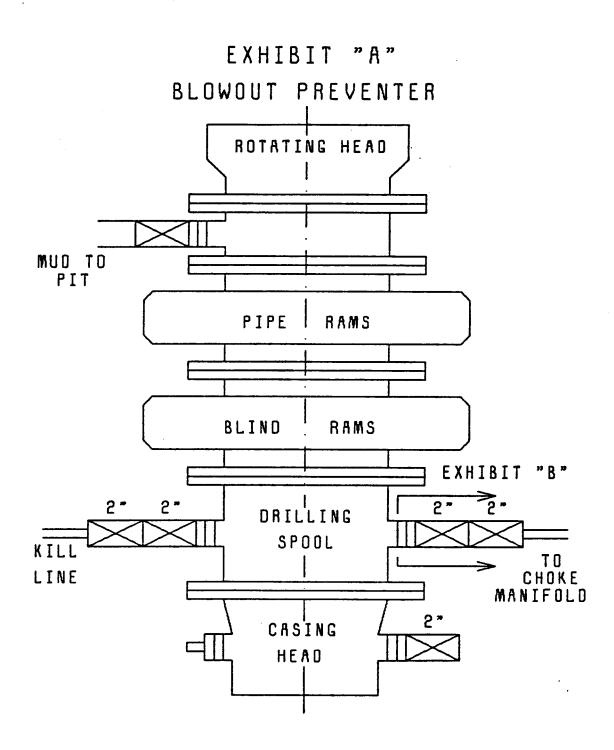
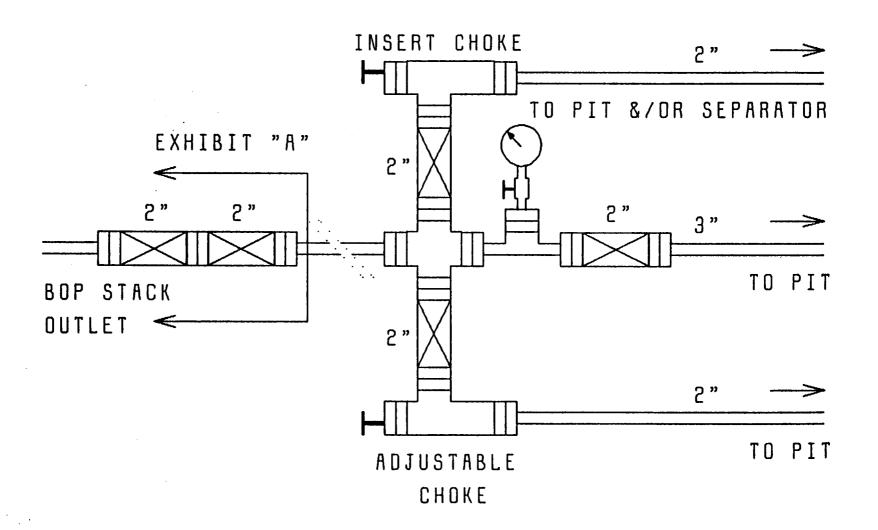


EXHIBIT "B" CHOKE MANIFOLD



DETAILED DRILLING PROGRAM

DATE: March 9, 1990

WELL NAME: Barnes 18M WELL NO.: 1

LOCATION: Section 18, Township 40S, Range 25E

801' FSL, 1108' FWL San Juan County, Utah

ELEVATION: 4,826' GR

TOTAL DEPTH: 7,226'

PROJECTED HORIZON: Primary target is Desert Creek at 5,686'.

DRILLING, CASING AND CEMENTING PROGRAM

1. Move in and rig up rotary tools. Notify BLM of time of spud and intent to run surface casing.

- 2. Drill mouse hole and rat hole. Mix mud prior to spudding well.
- 3. Drill 12 1/4" hole to \pm 500'. Use fresh water gel/lime spud mud for drilling surface hole. Well bore inclination is not to exceed 1 at 500'. Deviation surveys will be run at least at 250' and at casing point.
- 4. Run B 5/8", 24 lb/ft, K-55, STC casing to TD. Cement with 371 sx (427 ft 3) of Class 'G' cement with 2% CaCl $_2$ and 1/4 lb/sk Celloflake (sufficient slurry volume to circulate cement to surface).
- 5. W.O.C. a minimum of 4 hours prior to nippling up BOP stack and related equipment. See BOP schematics for details.
- 6. Ensure that plug has been down at least 8 hours prior to commencing pressure testing procedures. Pressure test BOP to 2,000 psig for 30 minutes. Pressure test manifold and all related equipment to 2,000 psig. Pressure test casing to 1,500 psig for 30 min.
- 7. Drill out surface casing with 7 7/8" bit. Drill 7 7/8" hole to \pm 5,500°. Deviation surveys are to be taken every 500° or on a bit trip, whichever occurs first. Maximum allowable deviation will be 5 at TD, with the maximum allowable rate of change to be 1/100°.

- 8. Break over fresh water mud to saturated salt water, starch, salt gel system. Ensure conversion is complete and mud is conditioned prior to drilling into the Akah at \pm 5,800°. Drill and survey to TD.
- Run open hole logs and evaluate. Drill stem testing will be as per the wellsite geologist's recommendation.
- 10. If the well is determined to be productive, run 5 1/2" casing, as detailed in 10-Point Drilling Plan, to TD. Set stage cementing collar at \pm 4,000°. Cement in two stages as per cementing program in 10-point Drilling Plan.
- 11. Nipple down BOPE. Set 5 1/2" casing slips and cut off casing. Install well head. Release drilling rig and move rig off location.
- 12. If well is non-productive it will be plugged and abandoned as per State, BLM and Navajo Tribal stipulations.

Barnes 18M Well No. 1 Section 18, Township 40S, Range 25E 801' FSL, 1108' FWL San Juan County, Utah

GENERAL COMPLETION PROCEDURE

If the well is determined to be productive, move in completion rig. Perforate, acidize, and test each productive porosity zone. Completion work will commence after Sundry Notice approval is received. Detailed procedures will follow.

PLUGGING AND ABANDONMENT

If the well is determined not to be productive, the well bore will be plugged as per BLM, State and Navajo Tribal requirements.

Barnes 18M Well No. 1 Section 18, Township 40S, Range 25E 801' FSL, 1108' FWL San Juan County, Utah

SURFACE USE PLAN

1. EXISTING ROADS

Shown on the attached topographic map are the existing roads in the immediate area. Outlined is the route to be followed on the Hovenweep road. Existing roads will be maintained, as necessary, while operations are in progress.

2. PLANNED ACCESS ROAD (SHOWN IN RED)

The access road will be as shown on the attached topographic map. The road will be flat bladed, constructed 14' in width and will be maintained as necessary to prevent excessive damage to the existing terrain. The road will be upgraded if commercial production is established. It is anticipated that less than 500' of new road will be required to be constructed to the location pad.

3. LOCATION OF EXISTING WELLS & TANK BATTERIES

There are no other producing wells or facilities in the immediate area.

4. LOCATION OF EXISTING AND PROPOSED FACILITIES

No production facilities are presently in place. Should the well prove to be productive, facilities (tank battery etc) will be sited on the drilling location pad.

5. LOCATION & TYPE OF WATER SUPPLY

Water will be acquired from a private source. The water will be hauled from a flowing well permitted to Hay Hot Oil Inc., permitted under Water Right 09-1419, A60809.

6. SOURCE OF CONSTRUCTION MATERIALS

The need for additional construction materials is not anticipated. In the event that additional materials are required, they will be acquired either from private sources or with the approval of the Navajo Nation.

7. METHODS OF HANDLING WASTE MATERIAL

Trash will be contained on location in an enclosed bin. It will be hauled to an approved disposal site or burned on location if a burning permit is granted. The reserve pit will be lined, with an approved 7 mil liner, for containing drilling fluids. The pit will also be fenced. All drilling fluids, cuttings and chemical waste will be stored in the reserve pit. Liquid hydrocarbons will be stored in temporary storage tanks and hauled from location to approved sales facilities. The reserve pit will be emptied, back filled and restored to natural terrain status upon completion of drilling operations.

8. ANCILLARY FACILITIES

Chemical portable toilet facilities will be provided on location during drilling and completion operations. No camps or air strips are planned for this well.

9. WELL SITE LAYOUT

Attached is a surveyor's staking plat, cut and fill requirements and a schematic of the proposed rig layout.

10. PLANS FOR RESTORATION OF THE SURFACE

The location is laid out on a south west/north east trend and will require up to 13' of cut in the reserve pit (up to 6' of cut in the eastern corner of the location pad) and up to 5' of fill in the western corner of the location pad. Top soil removed from the pad will be stored at the well site. A reserve pit will be built on terrain containing sparse native vegetation. After drilling operations are complete, drilling fluid in the reserve pit will be allowed to evaporate. All remaining fluid in the pit will be disposed of into an approved disposal site. The reserve pit will remain fenced during the evaporation and disposal process. The pit will then be covered and the topsoil will be returned to the disturbed area. The terrain will be returned as near to its original condition as possible. Following operations, rehabilitation seeding will be in accordance with APD/BLM/BIA stipulations. There are no residents in the immediate area of the site.

CHUSKA ENERGY COMPANY
315 NORTH BEHREND AVENUE
FARMINGTON, NEW MEXICO 87401
DONALD S. BARNES

12. CERTIFICATION

I hereby certify that either I, or persons under my direct supervision have inspected the proposed drill site and access route: that I am familiar with the conditions which presently exist: that the statements made in this plan are, to the best of my knowledge, true and correct and that the work planned will be performed by Chuska Energy, or its subcontractors, in conformity with the terms and conditions under which it is approved.

DONALD S. BARNES

Operations Manager

CHUSKA ENERGY COMPANY

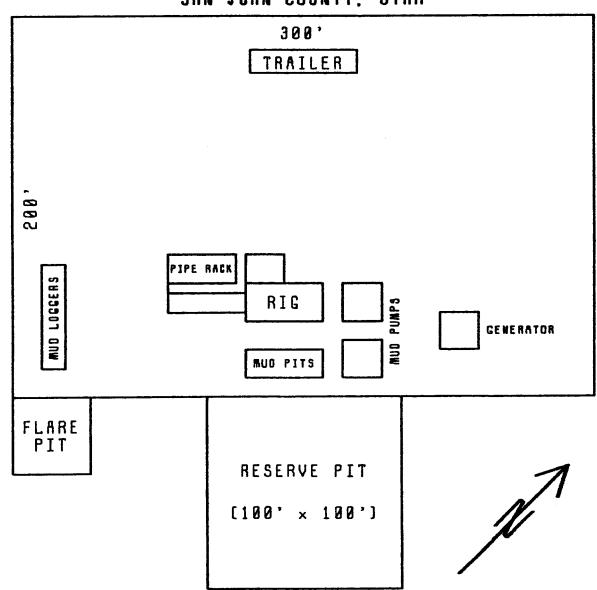
LOCATION LAYOUT

BARNES 18M-1

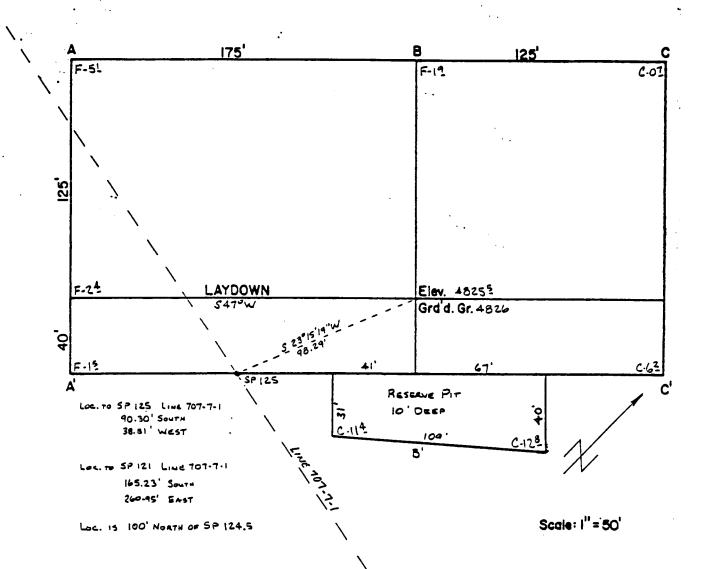
801' FSL, 1108' FWL

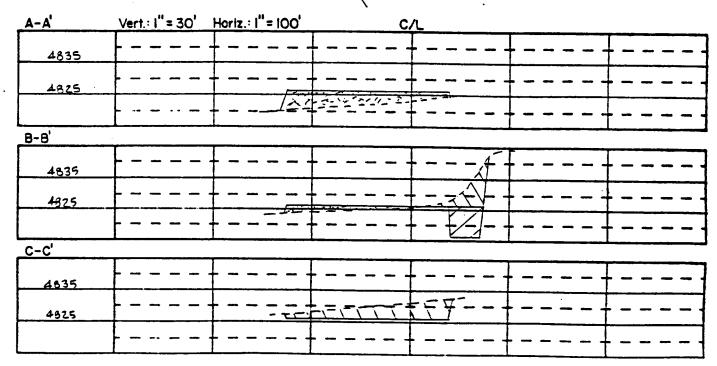
SECTION 18, TOWNSHIP 40S, RANGE 25E

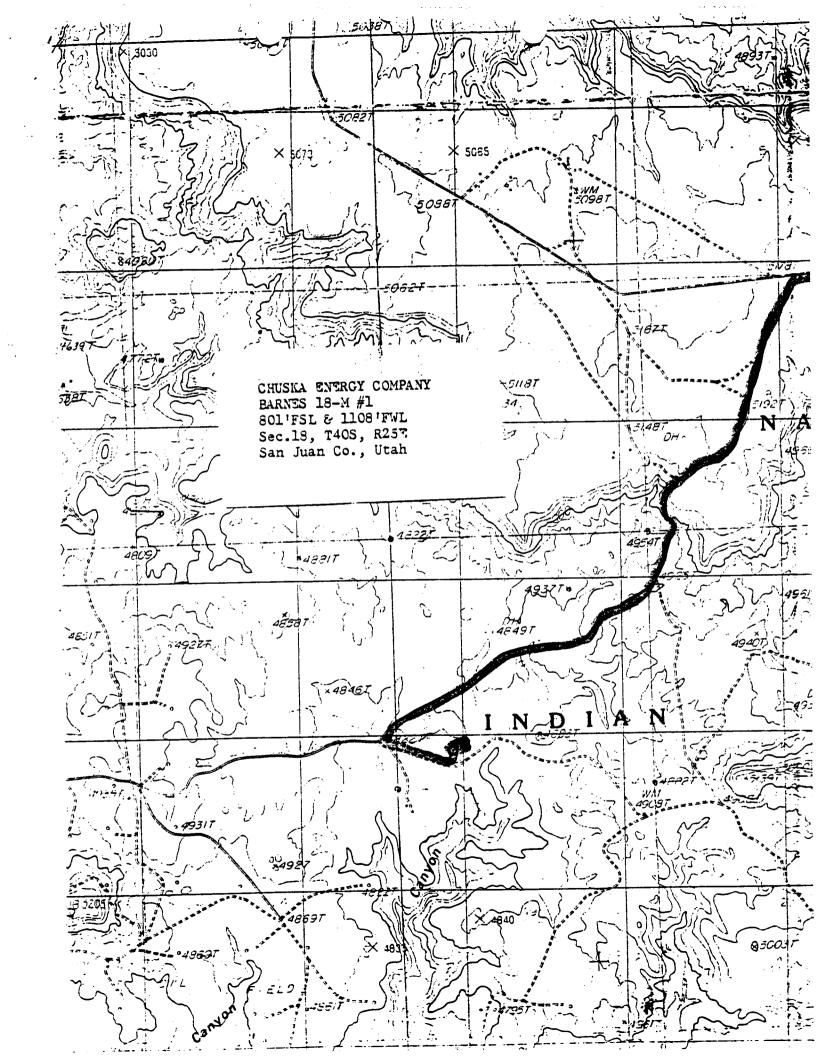
SAN JUAN COUNTY, UTAH



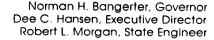
CHUSKA ENERGY COMPANY
BARNES 18-M #1
801'FSL & 1108'FWL
Sec.18, T40S, R25%
San Juan Co., Utah







OPERATOR Chuska Energy Company (N9290) DATE 3-13-90
WELL NAME Bornes 18M #/
SEC SWSW 18 T 40S R 25E COUNTY San Quan
43-037-3152 Indiana (2) API NUMBER TYPE OF LEASE
CHECK OFF:
PLAT BOND NEAREST WELL
LEASE FIELD POTASH OR OIL SHALE
PROCESSING COMMENTS: No other well in Sec. 18
Water Permit 09-1419 / Aloo 809 (Hat Hot Oil Inc.)
11,01,00
for an exception to Pause No. 17 (seconder) - Acreage Controlled by
Chusha with 660' radius, as required by order, but lie
Exception location requested to Kleb-3-7, however request needs to be for an exception to Cause No. 17 (seconder) - Acreage Controlled by Chusha with 660' radius, as required by order, but lie in wrong quarter-quarter Section. APPROVAL LETTER:
SPACING: R615-2-3 UNIT R515-3-2
17 2-24-60 CAUSE NO. & DATE (Exc. Loc.)
STIPULATIONS: (EXC. COC.)
CC: BIA
[C:D]R





Southeastern Area • 453 S. Carbon Avenue • P.O. Box 718 • Price, UT 84501-0718 • 801-637-1303

March 13, 1990



DIVISION OF OIL, GAS & MINING

Chuska Energy Company Attn: Donald S. Barnes, Operations Manager 315 North Behrend Farmington, New Mexico 87401

- Re: 1) Barnes 18M Well #1: SW4SW4 Sec. 18, T40S, R25E, SLB&M -
 - 2) East Rim 15L Well #2: NW4SW4 Sec. 15, T40S, R25E, SLB&M
 - 3) Finger Mesa 15P Well #1: SE4SE4 Sec. 15, T40S, R25E, SLB&M
 - 4) NW Cajon 1I Well #1: NE4SE4 Sec. 1, T40S, R24E, SLB&M
 - 5) Runway 10G Well #1: SW4NE4 Sec. 10, T40S, R25E, SLB&M

Dear Mr. Barnes:

This letter will serve as authorization from this Division to proceed with the drilling at the five noted locations. It is understood that the drilling and maintenance water will be hauled to the sites by Hay Hot Oil Inc. under their existing water right 09-1419 (A60809). It is also noted on your request that 1.0 acre feet of water will be required at each location.

If you have any questions concerning this matter, please feel free to contact me.

Sincerely,

Mark P. Page Area Engineer

Cc: Lisha Romero, Div. of Oil, Gas & Mining Jerry Howell, Hay Hot Oil Inc.

MPP/mjk



CHUSKA ENERGY COMPANY

315 N. BEHREND • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 326-5525

RECEIVED

March 9, 1990

MAR 15 1990

MAR 12 1990 WATER RIGHTS PRICE

OWNERS OF COMMITTEE

State of Utah Water Rights Division P.O. Box 718 Price, Utah 84501-0718

Attn: Mr Mark Page

Ref: Water Use Permits:

Barnes 18M Well No. 1 13 4025 500 500 15L East Rim Well No. 2 nws 15 40 25 SESC 1540 25 Finger Mesa 15P Well No. 1 1 40 24 NW Cajon 1 I Well No. 1 nESE Well No. 1 SWAE 1040 25 Runway 10G

Dear Mr Page

Chuska Energy Company proposes to drill the subject wells commencing in late May/early June. We intend to haul water in tank trucks, utilizing Hay Hot Oil Service who will obtain water from their artesian well, details of which are as follows:

1050' FNL, 1575' FWL S27 T40S R23E San Juan County, Utah

Permit No: 09-1419 (A60809)

Anticipated water requirements are 1.0 acre-feet per well. Site locations are as detailed in the attached topographic map and staking plats.

Please advise if you require any further information.

Sincerely yours

Donald S. Barnes
Operations Manager

DSB/cswh

File: C:\WP\CSWH\BARN18M1\WATER

encl.

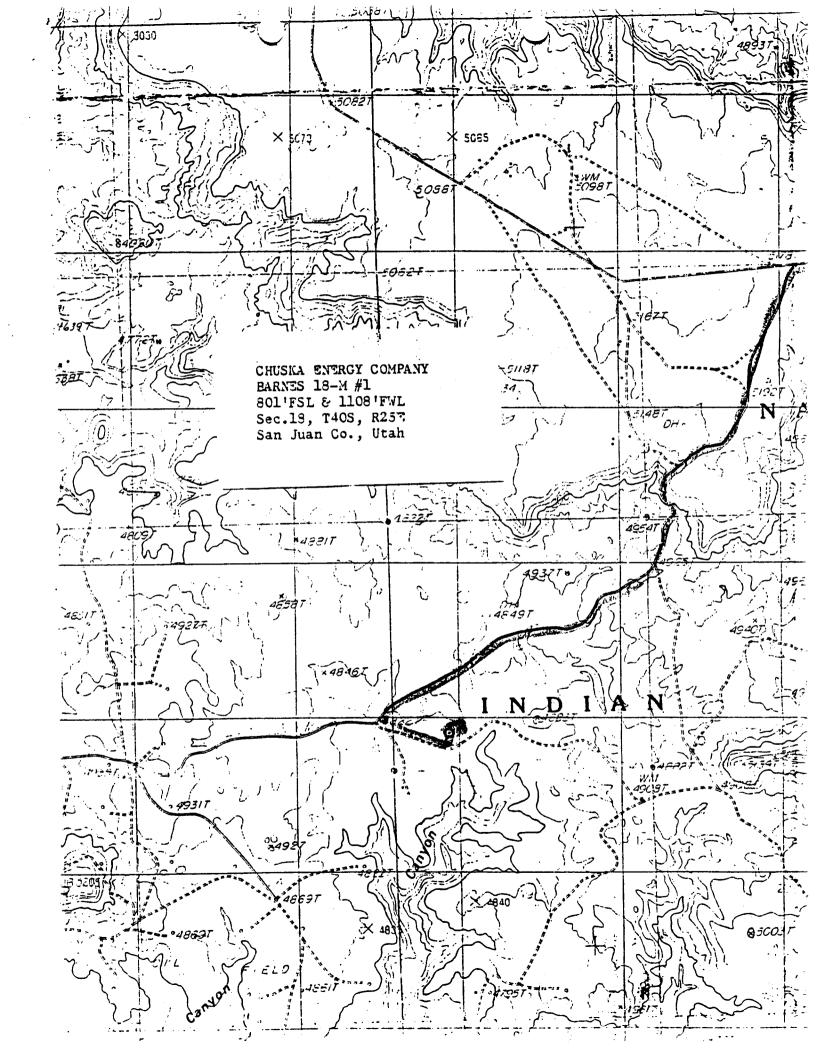
COMPANY	CHUSKA ENERGY COMPANY		
LEASE	BARNES 18-M	. WELL NO	
SEC	18 , T. 40 S		
COUNTY	San Juan	STATE Utah	
LOCATION _	801'FSL & 1108'FWL	DIE	CEUV) FIM
ELEVATION	4826		IAR 15 1990
			14K 1.3 (33)

Fd.			DIVIS	ION OF & MINING
		1	2	or minalian
		1		-
Sec.				
	18			
				-
				
1108'				
801,				
Fd.			Fd.	

SCALE : 1"= 1000"

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

	WEN METICAL	Wi- Ell I
SEAL:	#8466) #8466) SURVE	WILLIAM E. MAHNKE II NEW MEXICO P.L.S. Nº 8466
	POFESSIONAL LAND SURVE	EYED



BEFORE THE OIL AND GAS CONSERVATION COMMISSION

BATU TO STATE OF UTAR

IN THE MATTER OF THE APPLICATION OF THE TEXAS COMPANY, THE CARTER OIL COMPANY AND CONTINENTAL OIL COMPANY FOR AN ORDER ESTABLISHING 80-ACRE DRILLING UNITS FOR THE AMETH POOL, SAM JUAN COUNTY, UTAM, WITH REFERENCE TO THE EMOWN PRODUCING ZOMES OF THE HERMOSA FORMATION (CAUSE NO. 8)

CAUSE NO. 17 (CORSOLIDATED CAUSES NOS. 8 AND 11)

AND

IN THE MATTER OF THE APPLICATION OF CONTINENTAL OIL COMPANY FOR AN ORDER ESTABLISHING 80-ACRE DRILLING AND SPACING UNITS FOR THE UPPER PARADOX SECTIONS OF THE HERMOSA FORMATION, DESERT CREEK AREA, BAN JUAN COUNTY, UTAN (CAUSE NO. 11) PINDINGS OF FACT.
CONCLUSIONS OF LAW
AND ORDER

The above captioned Cause No. 17 is before the Oil and Gas Conservation Commission of the State of Utah as a consolidation of Causes Nos. 8 and 11, such consolidation having been effected on Yebruary 2, 1959, by order of this Commission. Each of said Causes Nos. 8 and 11 arose out of an application for an order establishing 80-acre drilling and spacing units for an area defined in the particular application. Since the initiation of said proceedings, the Commission has, pursuant to several requests, permitted several additions to the areas covered by said appliestions as originally filed, with the result that this consolidated Cause now involves those lands hereinbelow particularly described. Hearings were held in Cause No. 8 and in Cause No. 11 prior to their consolidation. and further hearings have been held in this Cause No. 17 since such consolidation. During the extensive course of the proceedings numerous witnesses testified and many exhibits were introduced both in support of and in opposition to the applications. On January 30, 1960, upon the conclusion of the hearings in this consolidated Cause, the matter was submitted to the full Commission for decision.

HOW, THEREFORE, after due and careful consideration, this Commission makes the following Findings of Fact and Conclusions of Law:

FINDINGS OF FACT

1. The area involved in this consolidated Cause, and which is hereinafter for convenience referred to as the "Greater Aneth Area," lies within San Juan County and is described as follows:

A. 40 S. R. 23 E., SLEN

Section 1: Att Section 2: Ek Section 11: E, 50% Sections 12, 13, 14, 23 through 26, 34, 35, 36: All

7. 40 S., R. 24 E., SLEM

Sections 7 through 11, 13 through 35: All 43-35

T. 40 S. R. 25 E. SLEH

Section 16: By Section 17: 54 Section 18: 84 Sections 19, 20, 21: All Section 22: 54, NK Sections 27 through 34: All

/T. 41 8. R. 23 R., SLEM

Sections 1, 2, 3, 10 through 15, 22, 23, 24: All Section 25: Ek Section 35: Ek Section 36: All

√T. 41 S., R. 24 R., SLBH

Sections 1 through 24: All Section 25: W Sections 26 through 35: 'All

T. 41 S., R. 25 K., SLEW

Section 3: We Sections 4 through 9: All Section 10: NWk Sections 16 through 20: All

T. 42 S. R. 23 E. SLEM

Section 1: 411 Section 2: Ek Section 11: Zi Section 12: All

E. 42 8., R. 24 E., SLEM

Sections 2 through 10: All

2. The Desert Creek (Aneth) formation is continuous over the Greater Aneth Area and constitutes a common source of supply. It is

found at a depth of approximately 5600 feet below the surface of the ground and varies in thickness from 100 feet to 220 feet. The formation consists essentially of carbonate material with minor amounts of other constituents. The reservoir is what is known as a "stratigraphic trap."

- 3. The properties of the reservoir rock, in regard to permeability and porosity distribution, indicate a degree of heterogeneity that is common in limestone reservoirs.
- 4. The original reservoir pressure at a datum of 900 feet subsea was approximately 2200 pounds per square inch.
- 5. The producing mechanism from the original reservoir pressure down to the saturation pressure or bubble point pressure is "fluid expansion." The producing mechanism below the saturation pressure or bubble point pressure is the release of gas originally in solution in the oil or so-called "solution gas drive." The predominant producing mechanism is "solution gas drive."
- 5. Reduced formation pressures which have been found upon the completion of new wells show that drainage of oil and gas had occurred from under the locations of the newly drilled wells by reason of production from earlier drilled wells.
- 7. Withetherdrilling of the field on an 80-acre pattern there is and will be efficient borisontal communication. In some areas of the field there is also efficient vertical communication through interfingering of reservoir layers aided by fractures, while in other areas vertical communication between layers depends to a substantial extent upon connection provided by the well bore.
- 8. In the five special test wells drilled by Shell Oil Company and the well layer tested by Rumble Oil and Refining Company, pressure depletion from original reservoir pressure had occurred in each of the lenses and layers tested. The pressure depletion conditions found at the location of each such well were normal for a heterogeneous reservoir of this type.
- 9. The various layers or lenses containing oil and gas are of sufficient size that wells drilled with a density of one well to each 80 acres will, with insignificant exceptions, pierce the various layers and

provide efficient and adequate intercommunication for all parts of the reservoir.

- throughout the field, any so-called barriers of low permeability are not continuous and do not completely surround or isolate oil and gas or create islands but, to the contrary, the pressure history of this field along with the gas/oil ratio behavior in relationship to the total cumulative production demonstrates that the field is being efficiently and economically drained by one well to each 50-acre tract.
- Il. Pressure differentials exist in the reservoir. These differentials are normal, are to be expected and constitute a condition necessary to the flow of oil through the reservoir into producing wells. The variation in magnitude of the pressure differentials existing within the reservoir is attributed to differences in rate of production, cumulative production, permeability, pay thickness, porosity and water saturation and differences in shut-in times prior to measurement of pressures.
- 12. One well to each 80 acres will efficiently and economically drain the reservoir as found in and underlying the Greater Ameth Area.
- 13. Righty-sore spacing and drilling units for the Greater Aneth Area should be established in order to prevent wasts, to avoid the drilling of unnecessary wells and to protect the dorrelative rights of interested parties. Ho more than one well should be drilled on any such unit for the production of oil or gas from the Desert Creek (Aneth) formation.
- 1A. Except for the "Specially Designated Brilling Units" hereinafter specified, the drilling and spacing units for the Greater Aneth Area
 should be formed by dividing each governmental quarter section into two
 such units to consist respectively of the east half of such quarter section
 and the west half of such quarter section. Each specially designated
 drilling unit consisting of an 80-scre tract as specifically described
 below should constitute a drilling and spacing unit and represents a
 departure from the general spacing unit pattern as set forth in the
 preceding sentence.

SPECIALLY DESIGNATED DRILLING UNITS

#40 South PAGE RANGE 16 40 South 24 East

80-ACRE TRACT	SECTION	TOWNSHIP	RANCE
suk nek, nek sek	16	40 South	24 Zast
ant set, net sut	16	40 South	24 East
sł seł	16	40 Bouth	24 East
Sk swk	16	40 South	24 East
sut nut, nut sut	16	40 South	24 East
mut mut, set mut	16	40 South	24 Hest
net net, sut net	13	41 South	23 East
set net, net set	13	41 South	23 East
nct net, net nut	13	41 South	23 Kast
nuk nuk, sek nuk	13	41 South	23 East
suk nuk. nuk suk	13	41 South	23 East
nuk set, net sut	13	41 South	23 East
sh sek	13	41 South	23 East
sł swł	13	41 South	23 East
uf anf	11	41 South	24 East
sł swł	11	41 South	24 Yest
nh suk	11	41 South	24 Kast
sh sah	11	. 41 South	24 East
nek nek) nek nek)	11) 12)	41 South	24 East
set set) sut sut)	11) 12)	41 South	24 East
His ner	12	41 South	24 Rest
sh nek	12	41 South	24 East
ny suk	18	41 South	24 East
sk suk	18	41 South	24 East

15. Except as may be hereafter ordered by the Commission, after notice and hearing, and as hereinafter provided, in that portion of the Greater Aneth Area lying north of the San Juan River the permitted well for a spacing unit should be located in either the northwest quarter of a governmental quarter section or in the southeast quarter of a governmental quarter section and should be not less than 500 fact from any property or lease line or governmental quarter-quarter section line. Except as

hereinafter provided, in that portion of the Greater Aneth Area lying south of the San Juan River the permitted well for a spacing unit should be located in either the northeast quarter of a governmental quarter section or in the southwest quarter of a governmental quarter section and should be not less than 500 feet from any property or lease line or governmental quarter-quarter section line. An exception should be recognized for any well which has heretofore been drilled or which is now being drilled to the Dasart Creek (Aneth) formation and which is not located in accordance with the general well location pattern above defined and such heretofore drilled or now being drilled well shall be the permitted well for the drilling and spacing unit upon which it is located, provided expressly that no one of the five test wells drilled by Shell Oil Company under this Commission's order of February 24, 1959 in this Cause shall constitute the permitted well for the drilling unit upon which such well was drilled unless, after notice and hearing, specifically ordered by this Commission pursuant to said Order of February 24, 1959, or otherwise; and provided further that the water injection well drilled by Phillips Petroleum Company under this Commission's order of August-5, 1959 in Cause No. 23 shall not constitute the permitted well for the drilling unit upon which such well was drilled unless, after notice and hearing, specifically so ordered by the Commission.

quarter section" or to any subdivision thereof or to a "governmental quarter-quarter section" or to any specific description by subdivision, section, township and range, such reference is intended, in the case of surveyed lands, to refer to the indicated quarter section or other legal subdivision as determined by the government survey and is intended, in the case of unsurveyed lands or of partially surveyed lands, to refer to the indicated quarter section or other legal subdivision as determined by the didicated quarter section or other legal subdivision as determined by and through projection or protraction from existing township surveys and/or existing township boundary line surveys.

CONCLUSIONS OF LAW

 The Countssion has jurisdiction over the subject matter of this Cause and over the lessees and operators in the area involved. Notice of the respective hearings and respective other proceedings in this consolidated Cause, and in Causes Nos. 8 and 11 prior to the consolidation thereof, was in each instance given in all respects as required by law.

- 2. The Desert Creek (Aneth) formation is continuous over the Greater Aneth Area, as such area is defined in Finding 1 of the foregoing Findings, and constitutes a common pool or source of supply.
- 3. One well to each 80 acres will efficiently and economically drain the said pool or common source of supply as found in and underlying the Greater Aneth Area.
- 4. The establishment of 80-scre spacing and drilling units for the Greater Aneth Area is necessary to prevent waste, to avoid the drilling of unnecessary wells and to protect the correlative rights of interested parties.
- 3. The shape and pattern of the spacing units for the Greater Aneth Area should be as set forth and defined in Finding 14 of the foregoing Findings.
- 6. Ho more than one well should be drilled on any such spacing or drilling unit for the production of oil or gas from the Desert Creek (Anoth) formation.
- 7. The locations or patterns of the permitted wells should be as set forth in Finding 15 of the foregoing Findings.
- 8. The here-involved applications for the issuance by this Commission of an Order establishing 80-acre spacing should be granted.

ORDER

IT IS THEREFORE ORDERED by the Commission as follows:

- That 80-sers drilling and spacing units be and the same are heraby established for the production of oil and gas from the Desert Crack (Anoth) formation underlying the Greater Aneth Area;
- That the shape and pattern of such drilling and spacing units shall be as set forth and defined in Finding 14 of the foregoing Findings;
- 3. That no more than one well shall be drilled on any such unit for the production of oil or gas from the Desert Creek (Aneth) formation:

- 4. That the location of the permitted well for each such unit shall be as set forth and defined in Finding 15 of the foregoing Findings, provided, however, that an exception in respect to the location of a permitted well may be had without notice or hearing upon the filing with the Commission of an application showing that the proposed exception location is within the quarter-quarter section specified hereunder as the situs for the permitted well; that topographic conditions exist which reasonably require a well location nearer than 500 feet to one or more boundaries of said quarter-quarter section; and either that the ownership of all oil and gas leases within a radius of 660 feat of the proposed exception location is common with the ownership of the oil and gas leases upon the proposed exception location or that all owners of oil and gas leases within such radius have consented in writing to the proposed exception location.
- 5. That nothing in the foregoing Findings of Fact or Conclusions of Law or in this Order is intended or shall be construed in any manner to determine or affect any question relating to the boundaries of any lease or the title to any lands or to determine the rights of any party in respect to any voluntary or involuntary pooling of interests within any hereby established spacing or drilling unit.
 - 5. That this Order shall be effective forthwith; and
- 7. The Commission retains continuing jurisdiction of all matters covered by this Order.

DATED this 24th day of February, 1960.

By Order of THE OIL AND GAS CONSERVATION CONSISSION OF THE STATE OF UTAM

EDWARD W. CLYDE,
Commissioner Presiding

AS E MAIN 4 MAIN 6	
	-
V. JO Kornson	
	_



CHUSKA ENERGY COMPANY

315 N. BEHREND • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 326-5525

March 26, 1990



State of Utah Department of Natural Resources

Division of Oil, Gas and Mining

355 West North Temple

3 Triad Building, Suite 350

Salt Lake City, Utah 84180-1203

Ref: Sundry Notice: Barnes 18M-1 - Move Location/Change Name

Gentlemen

Attached for your examination and approval is the original and two copies of the subject Sundry Notice which is being submitted as a result of moving the well in order to comply with State spacing orders.

Please advise if you require additional information concerning this application. Chuska will greatly appreciate your prompt consideration.

Sincerely,

Donald S. Barnes Operations Manager

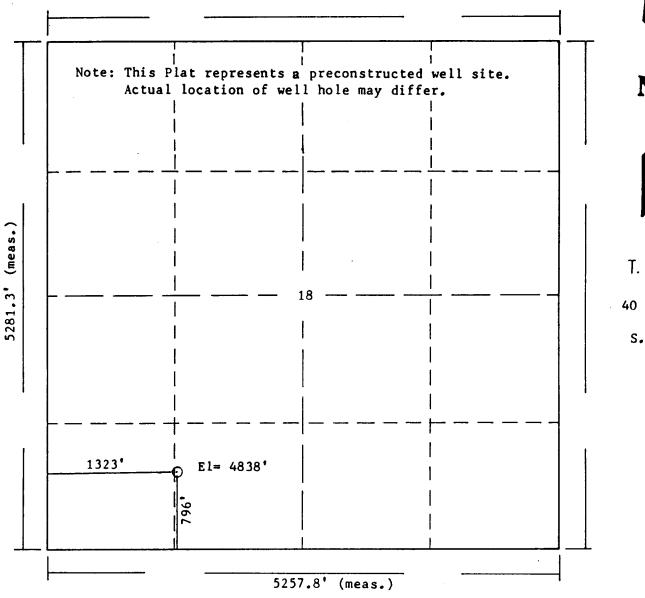
DSB/cswh

File: C:\WP\CSWH\BARNES.18M\MOVESUN.CVR

encl.

STATE OF UTAH DIVISION OF OIL, GAS AND MINING

			NOG 8702-1116
(Do not use this form for 5	OTICES AND REPORTS reposais to drill or to deepen or plus PPLICATION FOR PERMIT—" for		6. IF INDIAN. ALLOTTEE OR TRIBE NAME NAVAJO Tribal
L OIL GAS OTHE		WAR 29 1000	7. UNIT AGREEMENT NAME
Chuska Energy Cor	npany	MAR & 6 1990	4. FARM OR LEASE NAME
1- Appress of operator	d Fame to the New	DIVISION OF	Barnes 18M
	d, Farmington, New		9. WELL NO.
See also space LT below.)	clearly and in resolutions with any State to		10. FIELD AND POOL, OR WILDCAT
At surface At proposed prod. cone	801' FSI	L, 1108′ FWL ఇక్కు	- Wildcat Aneth (365)
Wr prohoted blody tone	Same	SE 200	SURVEY OR AREA
14. ME NO.	111 ELEVATIONS (Show whether	0E 3T 03 ara	S18 T40S R25E .
	11 ELEVATIONS (Show weether)	SR	San Juan Utah
tai. Chec	k Appropriata Box To Indicate	Nature of Notice, Report or O	
notice of in			DUENT REPORT OF:
TEST WATER SHUT-OFF	PULL OR ALTER CASING	WATER SHUT-OFF	REPAIRING WELL
FRACTURE TREAT SHOOT OF ACIDIZE	MULTIPLE COMPLETE	FRACTURE TREATMENT	ALTERING CASING
REPAIR WELL	ADDRAEA CHANG SPANS	SHOOTING OR ACIDIZING	ABANDONMENT*
(Other)		(Other)(Note: Report results	of muticle completion on Well
AZPROK. DATE WORK WILL ST	6-1-90	DATE OF COMPLETION	molecton Report and Log (orm.)
In order to comply	/ with State spacin	* Must be accomp	partient dates, including estimated date of the vertical depths for all markers and zones partied by a cement verification report. Lation of the well has of the the the same section.
	in renaming of the		n to naming criteria.
Old Name: Barnes 18 Old Location: 801´ Old Elevation: 4,82	FSL, 1108' FWL	New Elevation:	796' FSL, 1323' FWL
Refer to attachment	s: revised staking		
		*	Sundry of 3-28-90 changes well back to Bernes 18M+11.
8. I hereby certify that the forestern	Sisters and correct	perations Manager	3-26-90
SIGNED DONALO SA	Barnes TITLE		DATE
(This mace for Federal or State of	(fice use)		
APPROVED BY	TITLE		



Powers Elevation of Denver, Colorado has in accordance with a request from Monte Stuart for Chuska Energy Company determined the location of Barnes 18-N-1 to be 796' FSL & 1323' FWL of Section 18, Township 40 s. Range 25 E. Salt Lake Meridian,

Scale: 1"=1000'

San Juan

County

Utah.

I hereby certify that this plat is an accurate representation of a correct survey showing the location of

20693

PHILIPPIE HINT

Date: 💰

March-24, 1990

Licensed Land Surveyor No. State of



CHUSKA ENERGY COMPANY

315 N. BEHREND • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 326-5525



March 28, 1990

DIVISION OF OIL, GAS & MINING

State of Utah Department of Natural Resources Division of Oil, Gas and Mining 355 West North Temple 3 Triad Building, Suite 350 Salt Lake City, Utah 84180-1203

Attn: Lisha Romero

Ref: Barnes 18M-1

Dear Ms Romero

Further to your telephone conversation with this office of yesterday afternoon, Chuska Energy wishes to advise that the location of the subject well was recently moved in order to comply with State of Utah spacing orders, namely Cause 17 (a Sundry Notice to this effect was submitted 3.26.90). Subsequent archaeological examination of the new location, however, indicated that it was sited on and surrounded by artifacts and sites. Any attempt to move the location further east into the SE/4 SW/4 of Section 18 is precluded by reason of the severe topography which exists in the area.

In view of the above, Chuska Energy respectfully requests that administrative approval be granted for the drilling of the well in its original location, namely:

801' FSL, 1108' FWL Section 18, Township 40S, Range 25E San Juan County, Utah

Please advise if you require additional information concerning this application. Chuska will greatly appreciate your prompt consideration.

Sincerely,

Donald **&.** Barnes Operations Manager

DSB/cswh

File: C:\WP\CSWH\BARNES.18M\EXCEPT



Division Director

State of Utah DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

355 West North Temple 3 Triad Center, Suite 350 Salt Lake City, Utah 84180-1203 801-538-5340

May 1, 1990

The Times Independent P. O. Box 129 Moab, Utah 84532

Gentlemen:

RE: Notice of Intention of Agency Action - Reference No. 31521

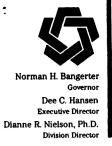
Enclosed is a Notice of Intention of Agency Action.

It is requested that this notice be published ONCE ONLY, as soon as possible. Upon completion of this request, please send proof of publication and statement of cost to the Division of Oil, Gas and Mining, 355 West North Temple, Suite 350, Salt Lake City, Utah 84180-1203.

Sincerely,

Lisha Romero Administrative Analyst

WE14/1 cc: R. J. Firth Enclosure



State of Utah DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

355 West North Temple 3 Triad Center, Suite 350 Salt Lake City, Utah 84180-1203 801-538-5340

May 1, 1990

Newspaper Agency Corporation Legal Advertising 157 Regent Street Salt Lake City, Utah 84110

Gentlemen:

RE: Notice of Intention of Agency Action - Reference No. 31521

Enclosed is a Notice of Intention of Agency Action.

It is requested that this notice be published ONCE ONLY, as soon as possible. Upon completion of this request, please send proof of publication and statement of cost to the Division of Oil, Gas and Mining, 355 West North Temple, Suite 350, Salt Lake City, Utah 84180-1203.

Sincerely,

Lisha Romero Administrative Analyst

WE14/2 cc: R. J. Firth Enclosure

Mailing List For Notice of Intention of Agency Action - Reference No. 31521

Mr. Donald Barnes Chuska Energy Company 315 North Behrend Farmington, New Mexico 87401

(The ownership of all oil and gas leases within a radius of 660 feet of the proposed exception location is common with the ownership of the oil and gas lease #NOG 8702-1116.)

Lisha Romero

Administrative Analyst

May 1, 1990

143 SOUTH MAIN ST. P.O. BOX 45838 SALT LAKE CITY, UTAH 84145 FED. TAX I.D. # 87-0217663

Newspaper Agency Corpo tion The Salt Lake Tribune (N) DESERT NEWS

CUSTOMER'S COPY

LEGAL ADVERTISING INVOICE

CUSTOMER NAME AND ADDRESS	ACCOUNT NUMBER	BILLING DATE
DIV. OF OIL, GAS/MINING	LE-5385340	05/10/90
ATTN: BARBARA L. DUMAS 355 W NO TEMPLE, #350 SALT LAKE CITY, UT 84180	FOR BILLING CALL (801)	INFORMATION) 237-2822

	Al	FFIDAVIT OF P	UBLI	CATION		
AS NEW	SPAPER AGENCY CORPO	RATION LEGAL BO	OOKKE	EPER. I CERTIFY	THAT	THE ATTACHED
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ADMINISTRATIV G AND SITING	REQUIREMENTS OF THE ORDER IN CAUSE					801-538-5340
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UTAH TATE OF UTAH T	O ALL PERSONS INTERESTED IN THE ABOVE					
MATTER. Se is hereby at	ven that the Division is commencing an	1			l	57820040
adjudicative p	iven that the Division is commencing an proceeding to consider the application inpany for administrative approval of an and siting requirements of the Order February 24, 1960, for the Barnes 18M # 1 1 18. Township 40 South, Range 25 East, 1. The proceeding will be conducted in rovisions of Rufe Ré15-10, Administrative 3-3, Exception to Location and Sting of enation of the Order in Cause No. 17 for the Desert Creek tornations which pre- and specing units consisting of the east of such quarter section. The order pre- ed well for each 80-care spacing unit be othwest quarter of a government quarter united as quarter of a government quarter united as quarter of a government quarter.	C3.	PTIO	NT.		MISC.CHARGE:
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on whose inte	days after publication of this notice from rests would be affected, the Division will a congress of reguested exception.					
D this 1st day	e approval of requested exception. of May, 1990, STATE OF UTAH	70000).0		05 /10 /00		160 01
	DIVISION OF OIL, GAS AND MINING /s/ R. J. Firth		<u>l</u>	05/10/90		162.24
•	Associate Director, Oil and Gas	ERTISING	PRESIDENT SECURIAR			YABLE TO: CORPORATION
0	PLEASE F	EMIL TO:				
				DIV. OF OIL,	GAS/MI	NING
	NEWSDADED AGEN	ICY CORPORATION		ATTN: BARBARA	L. DU	MAS

NEWSPAPER AGENCY CORPORATION
P.O. BOX 45838
SALT LAKE CITY, UTAH 84145-0838

DIV. OF OIL, GAS/MINING ATTN: BARBARA L. DUMAS 355 W NO TEMPLE, #350 SALT LAKE CITY, UT 84180

BEFORE THE DIVISION OF OIL, GAS AND MINING DEPARTMENT OF NATURAL RESOURCES STATE OF UTAH

---ooOoo---

IN THE MATTER OF THE APPLICATION OF CHUSKA ENERGY COMPANY FOR ADMINISTRATIVE APPROVAL OF AN EXCEPTION TO THE LOCATING AND SITING REQUIREMENTS OF THE ORDER IN CAUSE NO. 17 FOR THE PROPOSED BARNES 18M #1 WELL LOCATED IN SECTION 18, TOWNSHIP 40 SOUTH, RANGE 25 EAST, SAN JUAN COUNTY, UTAH

NOTICE OF INTENTION OF AGENCY ACTION

REFERENCE NO. 31521

---ooOoo--

THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that the Division is commencing an informal adjudicative proceeding to consider the application of Chuska Energy Company for administrative approval of an exception to the locating and siting requirements of the Order in Cause No. 17 dated February 24, 1960, for the Barnes 18M #1 well located in Section 18, Township 40 South, Range 25 East, San Juan County, Utah. The proceeding will be conducted in accordance with the provisions of Rule R615-10, Administrative Procedures; Rule R615-3-3, Exception to Location and Siting of Wells; and with consideration of the Order in Cause No. 17 for the development of the Desert Creek formation which prescribes 80-acre drilling and spacing units consisting of the east half and the west half of such quarter section. The order prescribes that the permitted well for each 80-acre spacing unit be located in either the northwest quarter of a governmental quarter section or in the southeast quarter of a governmental quarter section and should be not less than 500 feet from any property or lease line or govrnmental quarter-quarter section line.

The applicant intends to drill the Barnes 18M #1 well to a proposed depth of 7,226 feet to test the Desert Creek formation. The well location, 801 feet from the south line and 1108 feet from the west line of Section 18, Township 40 South, Range 25 East, San Juan County, does not comply with the locating and siting requirements of the Order in Cause No. 17 with regard to a well being located in either the northwest quarter of a governmental quarter section or in the southeast quarter of a governmental quarter section and not less than 500 feet from any governmental quarter-quarter section line.

Page 2 NOTICE OF INTENTION OF AGENCY ACTION

Objections, if any, to the approval of the proposed exception, should be filed with the undersigned and state with particularity the reasons for the objection. In the absence of a written objection within fifteen days after publication of this notice from any person whose interests would be affected, the Division will issue an administrative approval of the requested exception.

DATED this 1st day of May, 1990.

STATE OF UTAH DIVISION OF OIL, GAS AND MINING

Associate Director, Oil & Gas



State of Utah DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

355 West North Temple 3 Triad Center, Suite 350 Salt Lake City, Utah 84180-1203 801-538-5340

June 6, 1990

Chuska Energy Company 5315 North Behrend Farmington, New Mexico 87401

Gentlemen:

Re: <u>Barnes 18M-1 - SW SW Sec. 18, T. 40S, R. 25E - San Juan County, Utah</u> 801' FSL, 1108' FWL

Approval to drill the referenced well is hereby granted in accordance with the Order of Cause No. 17 dated February 24, 1960.

In addition, the following actions are necessary to fully comply with this approval:

- 1. Spudding notification within 24 hours after drilling operations commence.
- Submittal of an Entity Action Form within five working days following spudding and whenever a change in operations or interests necessitates an entity status change.
- 3. Submittal of the Report of Water Encountered During Drilling, Form 7.
- 4. Prompt notification if it is necessary to plug and abandon the well. Notify John R. Baza, Petroleum Engineer, (Office) (80l) 538-5340, (Home) 298-7695, or Jim Thompson, Lead Inspector, (Home) 298-9318.
- 5. Compliance with the requirements of Rule R6l5-3-20, Gas Flaring or Venting, Oil and Gas Conservation General Rules.

Page 2 Chuska Energy Company Barnes 18M-1 June 6, 1990

- 6. Prior to commencement of the proposed drilling operations, plans for facilities for disposal of sanitary wastes at the drill site shall be submitted to the local health department. These drilling operations and any subsequent well operations must be conducted in accordance with applicable state and local health department regulations. A list of local health departments and copies of applicable regulations are available from the Division of Environmental Health, Bureau of General Sanitation, telephone (80I) 538-6121.
- 7. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-037-31521.

Sincerely,

Associate Director, Oil & Gas

tas

Enclosures

cc: Bureau of Land Management

Bureau of Indian Affairs

J. L. Thompson

WE14/1-5



CHUSKA ENERGY COMPANY

1775 SHERMAN STREET - SUITE 1800 • DENVER, COLORADO 80203 • PHONE: (303) 863-7021 FAX #: (303) 863-7210

May 17, 1991

Ms. Vicki Kearney Utah Oil & Gas Commission 355 West North Temple Three Triad Center Suite 350 Salt Lake City, Utah 84180-1203

Dear Ms. Kearney:

Please keep all Chuska Energy Company data confidential until further notice.

Thanks,

Herbert P. Mosca

Chuska Staff Geologist

RECEIVED

DIVISION OF OIL GAS & MINING



CHUSKA ENERGY COMPANY

3315 BLOOMFIELD HIGHWAY • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 326-5525

17 May, 1991

State of Utah Department of Natural Resources Division of Oil, Gas and Mining 355 West North Temple 3 Triad Building, Suite 350 Salt Lake City, Utah 84180-1203

Ref:

Sundry Notice: Barnes 18M 1 Well Application for Extension of APD Approval

Gent lemen

Attached for your examination and approval are the original and two copies of the subject Sundry Notice.

Please advise if you require additional information concerning this submission.

Sincerely,

Larry G. Sessions Operations Manager

LGS/cswh

File: C:\WP51\BARNES.18M\EXAPDSUN.CVR

encl.

MAY 2 4 1991

DIVISION OF **OIL GAS & MINING**

STATE OF HTAH

DEPARTMENT NATURAL RESOUR DIVISION OF OIL, GAS AND MIN	
SUNDRY NOTICES AND REPORTS OF	Navajo Tribal
Do not use this form for proposals to drill new wells, despon existing wells, or to re- tine APPLICATION FOR PERMIT—for such proposa	enter plugged and abandaned selfa. 8. Unit or Communitization Agreement
. Type of Well	9. Nell Name and Number Barnes 18M 1
Name of Operator Chuska Energy Company	10. API Well Number 43-037-31521
. Address of Operator 3315 Bloomfield Highway, Farmington, NM 8740	4. Telephone Number 11. Field and Pool, or Wildcat Wildcat Wildcat
. Location of Well Footage : 801' FSL, 1108' FWL QQ, Sec, T., R., M.: SW/4 SW/4 S18 T40S R25E	County: San Juan State : UTAH
CHECK APPROPRIATE BOXES TO INDICATE IN	ATURE OF NOTICE, REPORT, OR OTHER DATA
NOTICE OF INTENT (Submit in Duplicate)	SUBSEQUENT REPORT (Submit Original Form Only)
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Approximate Date Work Will Start 5-31-92	Date of Work Completion Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form. * Hust be accompanied by a coment verification report.
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13. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Following further seismic and geological evaluation, the drilling of this well has been delayed. Chuska Energy therefore applies for an extension to the approval of the APD on the subject well.

CONFIDENTIAL

DIVISION OF OIL GAS & MINING

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14. I hereby certify	that the foregoing is true and correct						
Name & Signature	Christopher S.W. Hill		Title	Operations Engineer	Date	17 May 9	1
(State Use Only)		-					

APPROVED BY THE STATE

OF UTAH DIVISION OF

OIL, GAS, AND MINING See Instructions on Reverse Side A

(8/90)

STATE OF UTAH DEPARTMENT : NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

6. Lease	Designation and	Serial	Number
NOG	8702-11	16	

ì	Lease NOG	Designation and Serial Number 8702—1116	
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SUNDRY NOTICES AND REI	ORTS ON WELLS	Navajo Tr	ibal
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CHECKLIST FOR MICROFILMING

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STATE OF UTAH

INSTRUCTIONS

This form should be completed in compliance with the Utah Oil and Gas Conservation General Rules. If not filed prior to this time, all logs, tests, and directional surveys as required by Utah Rules should be attached and submitted with this report.

ITEM 29: "Sacks Coment": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the ITEMS 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval. ITEM 18: Indicate which elevation is used as reference for depth measurements given in other spaces on this form and on any attachments. cementing tool.

ITEM 33: Submit a separate completion report on this form for each interval to be separately produced (see instructions for items 22 and 24 above).

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Form 3160-4 (November 1983) (formerly 9-330)

UNITED STATES

SUBMIT IN DUI

RTE.

Form approved. Budget Bureau No. 1004-0137 Expires August 31, 1985

NO.

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*(See Instructions and Spaces for Additional Data on Reverse Side)

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37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity drill-stem, tests, including depth interval tested, cushion used, time recoveries):	FORMATION .	Core #1			Light Control of the				2 / * *********************************		

STATE OF UTAH DEPARTMEN TNATURAL RESOURCES DIVISION OF JIL, GAS AND MINING

d. Less	Designation and Serial Number
NOG	8702-1116

NOG	8/02-1	ттр		
7. Indian	Allottee o	r Tribe	Name	

Navajo	Tribal
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8. Unit or	Communitization	Agreemen

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Type of Well to American		Other (ep	pecify) P &	A		Barnes 18M(N)

10. API Well Number 2. Name of Operator Chuska Energy Company 43-037-31521

11. Field and Pool, or Wildcat 3. Address of Operator

3315 Bloomfield Hwy., Farmington, N.M. 87401 Wildcat

5. Location of Well 801' FSL & 1108' FWL (surface) San Juan Footage County: : 865' FSL & 1495' FWL (subsurface)

State : UTAH QQ. Sec. T., A., M. : Sec. 18, T40S, R25E

	E OF INTENT it in Duplicate)	SUBSEQ (Submit O	UENT REPORT riginal Form Only)
Abandonment Casing Repair Change of Plans Conversion to Injection Fracture Treat Multiple Completion Other	New Construction Pull or Alter Casing Recompletion Shoot or Acidize Vent or Flare Water Shut-Off	Abandonment * Casing Repair Change of Plans Conversion to Injection Fracture Treat XX Other P&A	New Construction Pull or Alter Casing Shoot or Acidize Vent or Flare Water Shut-Off
Approximate Date Work Will S	Start	Date of Work Completion Report results of Multiple Completion ON WELL COMPLETION OR RECO	ons and Recompletions to different reservoirs

13. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

		,	•		•		
PLUG	EXCESS %	FR MD	TO MD	FT.	SX.	TOPS	ZONES COVERED
1	100	5950 '	5498	452	260	5598	Ismay, DC, Akah
2	100	4730 °	4630 '	100	60	4680	Hermosa
3	100	3570 ¹	3470 '	100	60	3520	Cedar Mesa
4	100	2732 '	2630 '	100	60	2682	DeChelly
5	100	1655	1555 '	100	60	1605	Chinle
6	100	954 '	854 '	100	60	904	Navajo
7	100	546 '	456 '	100	60		Surface Csg
Q Q	**	50 *	Surface	50	25		

SED 0

Must be accompanied by a cement verification report.

	\rightarrow				
14. I hereby certify that the foregoing is true and correct	\neg				
Name & Signature Den H. Molan	_	BARRY A. WIELAND	Title	OPERATIONS MANAGER Dat	5-27-93
(State Lies Only)					

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Form 3160-5 (June 1990)		UNITE PARTMENT REAU OF LA		INTERIOR	Γ	-	PORM APPROVED Budget Bureau No. 1001-003 Expires: Murch 31, 1918 5. Lesse Designation and Seriel No.		
SUNDRY NOTICES AND REPORTS ON WEELS -2 PM 1: 21									
Do not use this	s form for prop Use "APPLIC	osals to drill ATION FOR I	or to dec PERMIT-	epen or reer -" for such	1990 The live	A September.	Navajo Tribal		
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	rest 🗓 Outser	- ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			3 AFCFIL	7 N	N/A . Well Name and No.		
	rgy Company				E STATE		Barnes 18M(N) API Well No.		
3. Address and Telepho 3315 Bloom	≖ №. field Highwa	av. Farmin	øton. 1	VM 87401	19202725	8112	43-037-31521 0. Field and Pool, or Exploratory Area		
4. Location of Well (Fo	ootage, Sec., T., R., M	I., or Survey Descr	iptice)	1 1 1 1 1 1 1 1	The state of the s		Wildcat		
	1108' FWL(s	•		CON	IFIDENTIA		1. County or Parish, State		
*	1495" FWL(s						San Juan County, Ut		
12. CHEC	K APPROPRI	ATE BOX(s)	TO IND	ICATE NAT	TURE OF NOT	ICE, REPORT	, OR OTHER DATA		
TYPE	OF SUBMISSION				TYPE	OF ACTION			
☐ Note	ce of latent			Abando	ament	· · · · · · · · · · · · · · · · · · ·	Change of Plans		
	•	1987		Recomp	letion		New Construction		
Sub:	sequent Report	357		Pluggin	=		Non-Routine Fracturing		
	d Abandonment Notice	ŀ		Casing	Repair Casing		Water Shut-Off		
	ADMINISTRAÇÃO	[P&A		Conversion to Injection Dispose Water		
		ļ					(Note: Report smalts of multiple completion or		
13. Describe Proposed or	Completed Operations	(Clearly state all per	rtinent details	, and give pertine	nt dates, including estim	sted date of starting an	Completion or Recompletion Report and Log for y proposed work. If well is directionally or		
give subsurface Exces		I and true vertical d	epths for all	markers and zone	es pertinent to this work	L.)*			
Plug %	FR MD	TO MD	FT	SX	TOPS	ZONES	COVERED		
1 100%	5950 '	5498¹	452	260	5598	Ismay,	DC,Akah		
2 100%	4730 '	4630'	100	60	4680	Hermos	a		
3 100%	3570¹	3470	100	60	3520	Cedar 1			
4 100%	2732'	2630'	100	60	2682	DeChel.	_		
5 100%	1655'	1555'	100	60	1605	Chinle			
6 100%	954.	854'	100	60	904	Navajo			
7 100%	546'	456	100	60			e csg shoe		
8 **	50 '	Surf	50	25 645		8 5/8"	to surface		
All plugs	were class	B' cement	(1.18	ft3/sx).	Plug 1 cor	ntained 2%	CaCl2 and was		
tagged pri	or to pumpi	ng plug #2	. All	plugs we	re displace	d with mud.	Verbal approval		
			A. Char	mbers, Ch	uska, 11:45a	am, 3-1-92.	Release Aztec rig		
# 222 @ 18:	30pm, 3-2-9	2.	Anne	ned on to	leannaigh an an an an				
** Circul	ated to sur	face.	LIEDIII	ity under bo	lugging of the we nd is retained un its completed.	til			

Title Operations Manager

*See instruction on Reverse Side

AREA MANAGER

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

PORM APPROVED
Budget Barrers No. 1804-0
Expirer March 31, 1973
Santan and Sarial)

NOG 8702-111

SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill or to despen or reentry to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals

Navajo Tribal

USS APPLICATION		7. If the or CA, Agramma
SUBMIT	IN TRIPLICATE	N/A
1. Type of Well OH OH Well Well X Other 2. Name of Operator Chuska Energy Company 3. Address and Telephone No. 3315 Bloomfield Highway, Farmi 4. Location of Well (Footage, Sec., T., R., M., or Servey De Section 18-T40S-R25E 801' FSL & 1108' FWL(surface) 865' FSL & 1495" FWL(subsurface)	•	8. Well Name and No. Barnes 18M(N) 9. AFI Well No. 43-037-31521 10. Field and Pool, or Explora: Wildcat 11. County or Parish, State San Juan Count: REPORT, OR OTHER DATA
12. CHECK APPROPRIATE BOX	TYPE OF A	CTION
TYPE OF SUBMISSION Notice of Intent Subsequent Report Final Abandonment Notice	Abandonment Recompletion Plugging Back Casing Repair Altering Casing Other P&A	Change of Plans New Construction Non-Routine Fracturing Water Shut-Off Conversion to Injection Dispose Water (Nese: Report masks of multiple: Completion or Recompletion Rep

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

give subsu Ex (rface locations CESS	and measures and use to the) FT	SX	TOPS	ZONES COVERED
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All plugs were class 'B' cement (1.18 ft3/sx). Plug 1 contained 2% CaCl2 and was tagged prior to pumping plug #2. All plugs were displaced with mud. Verbal appr by Ken Townsend, BLM, to Larry A. Chambers, Chuska, 11:45am, 3-1-92. Release Azt #222 @ 18:30pm, 3-2-92.

Circulated to surface.

** Circulated to Sur		2.2.2
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STATE OF UTAH DEPARTMEN F NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

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NOG	8702	_	1116		

	DIVISIO	NOG 8702 - 1116 7. Indian Allottee or Tribe Name					
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1. Type of Well	in the side of the	Le de la seculo de la colonia	Zako bul dealer	***	Section 2	9. Well Name and Number	
Well	Geri	Other (epe	cify) P	& A		Barnes 18M(N)	
2. Name of Operator	_					10, API Well Number	
Chuska Energy	Company					43-037-31521	
3. Address of Operator 3315 Bloomfiel	d Hwy, Farm	nington, N.M.	87401		Number 326 – 5525	11. Field and Pool, or Wildcat Wildcat	
5. Location of Well	801' FSL	& 1108' FWL	(surface)			
Footage	: 865' FSL	& 1495' FWL	(subsurf	ace)		ounty: San Juan	
QQ, Sec, T., R., M.	: Sec. 18.	T40S, R25E		W. 5 W. 1 - 2 A		ate : UTAH	
12 CHECK			INDICATE	NA FUHE O		ESECUENT REPORT	
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Abandonment Casing Repair Change of Plar Conversion to Fracture Treat Multiple Comp	Injection	New Construc Pull or Alter C Recompletion Shoot or Acidi Vent or Flare	asing	Casi	idonment * *** Ing Repair Inge of Plans Version to Inject ture Treat	New Construction Pull or Alter Casing Shoot or Acidize Vent or Flare Water Shut-Off	
Multiple Comp	l l	☐ Water Shut-O	ff	Othe			
XX Other P&A	,						
XXI	1			Date of V	Nork Completio	on	
Approximate Date	Work Will Start						
				n WELL	wits of Multiple Co CCMPLETION OF	ompletions and Recompletions to different reservoirs RECOMPLETION AND LOG form.	
				· Must be	e accompanied by	a cement verification report.	
13. DESCRIBE PROPOS locations and measu EXCES	ared and true vertica	ED OPERATIONS (Cital depths for all marks	early state all pers and zones p	ertinent details, a ertinent to this w	and give pertinent ork.)	dates. If well is directionally drilled, give subsurface	
PLUG %	FRMD	TO MD	FT	SX	TOPS	ZONES COVERED	
1 100	5950 '	5498 °	452	260	5598	Ismay, DC, Akah	
2 100	4730 '	4630 °	100	60	4680	Hermosa	
3 100	3570 '	3470 '	100	60	3520	Cedar Mesa	
4 100	2732 '	2632 '	100	60	2682	DeChelly	
5 100	1655 '	1555 '	100	60	1605	Chinle	
6 100	954 ¹	854 †	100	60	904	Navajo	
7 100	546 ¹	456 ¹	100	60		Surface csg. shoe	
8 **	50 '	Surface	50	25		8 5/8" to Surface	
All plugs will be class'B' cement (1.18 ft3/sx). Plug 1 will contain 2% CaCl2 and will be tagged prior to pumping plug #2. All plugs will be displaced with mud. Verbal approval by Ken Townsend, BLM, to Larry A. Chambers, Chuska, 11:45 A.M., 3-1-92. ** Circulate to Surface							

14. I hereby certify that the foregoing is true and correct

Name & Signature BARRY A. WIELAND Title OPERATIONS MANAGER Date 5-27-93

(State Use Only)

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Form 3160-5 (June 1990)	123	MAR 1982 D	41	ED ST. I OF T	HE INTE	RIOR RECEIL		PORM APPROVED Budget Bureau No. 1004-0135 Expires: March 31, 1993 5. Lease Designation and Sepirit No.
	\g		NOG 8702-1116					
Do not u	iso Pig in	orm for pro	Chais to drill ATION FOR	I or to PERM	deepen o	ON WELLS - 6 or reentity to a different such proposals INI	PM 1: 23 ent reservoir.	6. If Indian, Allottee or Tribe Name
	•		SUBMIT				TUN, N.M.	Navajo Tribal 7. If Unit or CA, Agreement Designation
I. Type of Well Oil Gas Well Well Cher							N/A 8. Well Name and No.	
2. Name of O	perator			*				Barnes 18M(N)
Chusk 3. Address an		gy Compan No.	у				· · · · · · · · · · · · · · · · · · ·	9. API Well No.
3315	Bloomf:	ield High	way, Farm	ingtor	1. NM 8	7401		43-037-31521 10. Field and Pool, or Exploratory Area
4. Location of Secti	Well (Foota)	r. Sec., T., R., T40S-R25E	M., or Survey Des	cription)			 	Wildcat
801 '	FSL &	1108; FWL	(surface)					11. County or Parish, State
865 '	FSL &	1495' FWL	(subsurfa	ce)				San Juan County, Utah
12.	CHECK	APPROPRI	ATE BOX(s	1 OT (NDICATE	NATURE OF NO	TICE, REPOR	T, OR OTHER DATA
	TYPE OF	SUBMISSION				TYI	PE OF ACTION	
	Notice o	f Intent				Abandonment		Change of Plans
	□				님	Recompletion		New Construction
	L: Subseque	ent Report			H	Plucking Back		Non-Routine Fracturing Water Shut-Off
	Final Ab	andonment Notice			透	Albring Casing		Conversion to Injection
					W. Tale	Other P&A		Dispose Water
12 0					<i>CD</i> .			Note Report results of multiple completion on Wr., Completion or Recompletion Report and Log form
give su	ibsurface locat	tions and measure	d and true vertical	depths for	rails—and give rail markers	e pertinent dates, including esti and zones pertinent to this wo	mated date of starting irk.)*	any proposed work. If well is directionally amilied
Plug	Excess %	FR MD	TO MD	FT	SX	TOPS	ZONES	COVERED
1	100%	5950 '	5498 '	452	260	5598	Temay	, DC,Akah
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5	100%	1655 '	1555 '	100	60	1605	Chinle	•
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7	100%	546 '	456 '	100	60			ce csg shoe
8	**	50 '	Surf	50	25		8 5/8	to surface
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		to surfa		,	ally n	· Chambers, Cho	3KG, 11.436	im, 5-1-92.
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Approved by		June Office (MC)			Title			MAR 0 9 1992
	approval, if	any:			-			AREA MANAGER
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*See Instruction on Reverse Side

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT FARMINGTON RESOURCE AREA 1235 LA PLATA HIGHWAY FARMINGTON, NEW MEXICO 87401

Attachment to Notice of

Re: Permanent Abandonment

Intention to Abandon

Well: 18 m(N) Brings

CONDITIONS OF APPROVAL

- 1. Plugging operations authorized are subject to the attached "General Requirements for Permanent Abandonment of Wells on Federal Leases."
- 2. with the Farmington Office is to be notified at least 24 hours before the plugging operations commence (505) 326-6201.
- 3. Blowout prevention equipment is required.
- 4. The following modifications to your plugging program are to be made (when applicable):

Office Hours: 7:45 a.m. to 4:30 p.m.

GENERAL REQUIREMENTS FOR PERMANENT ABANDONMENT OF WELLS ON FEDERAL AND INDIAN LEASES FARMINGTON RESOURCE AREA

- 1. Secure prior approval either on a Sundry Notice (Form 3160-5) or verbally from the Fluids Drilling & Production Section at this office before changing the approved plugging program.
- 2. Plugging equipment used shall have separate mixing and displacement pumps for and a calibrated tank to assure proper displacement of plugs. The Operator is the responsible for providing all measuring devices needed to assure proper measurement of materials being used.
- 3. A proper tank or pit will be used to contain all fluids pumped from the well during plugging operations. Unattended pits are to be fenced.
- 4. All cement plugs are to be placed through tubing (or drillpipe) and shall be a minimum of 100 feet in length with 50% excess inside casing or 100% excess when plug is set in open hole or squeezed into perforations. 15.6#/gal slurry weight is to be used when using class B neat cement or when CaCl₂ is used. Use the recommended slurry weight of other type cements when they are used (Class C, Pozzolan etc.).
- 5. Any cement plugs placed when well is not full of fluid, or when well may be taking fluid, (i.e. across perfs-unless bridge plug or retainer is used, across bad csg., or fresh water formations) will be tagged (touched) after cement has set to verify proper location.
 - 5a. Testing The first plug below the surface plug shall generally be tested by either tagging the plug with the working pipe string, or pressuring to a minimum pump (surface) pressure of 1000 psig, with no more than a 10 percent drop during a 15-minute period (cased hole only). If the integrity of any other plug is questioned, it must be tested in the same manner. Also, any cement plug which is the only isolating medium for a fresh water interval or a zone containing a valuable mineral deposit should be tested by tagging with the drill string.
- 6. Mud must be placed between plugs. Plugging mud is to be made up with a minimum of 15 lbs/bbl of sodium bentonite, and a nonfermenting polymer.

 Minimum consistency of plugging mud must be 9 lbs/gal and with a minimum viscosity of 50 sec/qt. Fresh water is to be utilized for mixing mud.
- 7. Following the placement of a cement plug, the withdrawl rate for at least the length of the cement plug shall not exceed 30 ft/min, in order to minimize the contamination of the plug.

- 8. Within 30 days after plugging work is completed, file a Sundry Notice (Subsequent Report of Abandonment, Form 3160-5), in quintuplicate with Area Manager, Bureau of Land Management, 1235 La Plata Highway, Farmington, NM 87401. The report should give in detail the manner in which the plugging work was carried out, the extent (by depths) of cement plugs placed, and the size and location (by depths) of casing left in the well. Show date well was plugged.
- 9. All permanently abandoned wells are to be marked with a regulation marker (4" pipe extending 4' above the ground line) containing the information as specified in 43 CFR 3162.6(d). Unless otherwise approved.
- 10. After plugging work is completed the surface is to be rehabilitated in accord with instructions from the Fluids Surface Management Section of the Farmington Resource Area Office.

All above are minimum requirements. The period of liability under the bond of record will not be terminated until the lease is inspected and surface work approved.

Please advise this office when the well location is ready for final inspection.

Failure to comply with the above conditions of approval may result in an assessment for noncompliance and/or a Shut-in Order being issued pursuant to 43 CFR 3163.1.

You are further advised that any instructions, orders or decisions issued by the Bureau of Land Management are subject to administrative review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4 and 43 CFR 4.700.

-13

Form 3160-5 (June 1990)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

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Budget	Bure	su N	o. 10	0135	į
Expi	rest	Мал	ъ 3I.	1993	

5. Lease Designation and Serial No.

NOG 87.02-1116
6. If Indian, Allottee or Tribe Name

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.

Use "APPLICATION FOR PERMIT—" for such proposals

Navajo Tribal

			SUBMIT	IN TRII	PLICA	TE	7. If Unit or CA, Agreement Designation
1. Type of Well							N/A
Oil Gas Well Well Other							8. Well Name and No.
2. Name of Op							Barnes 18M(N)
Chusk	a Energ	y Company	7			*	9. API Well No.
3. Address and			·				43-037-31521
3315	Bloomf i	ield Highv	way, Farmi	ington	, NM	87401	10. Field and Pool, or Exploratory Area
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		140S-R25E	(E)				11. County or Parish, State
		1108 FWL		\			
902.	rst & .	1495 FWL	(subsurfac	ce)			San Juan County, Utah
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•	TYPE OF	SUBMISSION	i			TYPE	OF ACTION
	Notice of	Intent	i			Abandonment	Change of Plans
	Α				Ī	Recompletion	New Construction
į	Subseque	nt Report				Plugging Back	Non-Routine Fracturing
	•		!		Ē	Casing Repair	Water Shut-Off
	Final Ab	andonment Notice				Altering Casing	Conversion to Injection
						V Other	Dispose Water
			j			1/1///	Nute. Report results of multiple completion on Well. Completion or Recompletion Report and Logicomia
13 Describe Pro	posed or Con	pieted Operations	(Clearly state all p	eranent de	ails. and	in the resent dates, including estima	
	bsurface locat	ions and measured	and true vertical				· ·
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Plug	%	FR MD	TO MD	FT	SX	1052	ZONES COVERED
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annro	val hv	Ken Towns	send. BLM	-0 " - •	arrv	A. Chambers. Chus	ska, 11:45am, 3-1-92.
		to surfac		, _	- J		-

STATE OF UTAH

G. Lee	e Desig	nation	and	Serial	Number
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DEPARIMEN TINAL RESOURCE						
DIVISION OF OIL, GAS AND MINING						
SENDEN NOTICE ESTABLE CONTINUES 1. The Water of Cher (specify) 2. Name of Operator Chuska Energy Company 3. Address of Operator 3315 Bloomfield Highway, Farmington, N.M. 87401 5. Location of Well 801' FSL & 1108' FWL (Surface)	7. Indian Allottee or Tribe Name Navajo Tribal 8. Unit or Communitization Agreement N/A 9. Well Name and Number Barnes 18M(N) 10. API Well Number 43-037-31521 11. Field and Pool, or Wildcat Wildcat					
Footage : 865' FSL & 1495' FWL (Subsurface	· · · · · · · · · · · · · · · · · · ·					
QQ, Sec, T., R., M. : Sec. 18, T40S, R25E	State : UTAH					
12 CHECK APPROPRIATE BOXES TO INDIGATE NA						
NOTICE OF INTENT (Submit in Duplicate)	SUBSEQUENT REPORT (Submit Original Form Only)					
Abandonment New Construction Casing Repair Pull or Alter Casing Change of Plans Recompletion Shoot or Acidize Fracture Treat Vent or Flare Multiple Completion Water Shut-Off Spud/Surface Casing C	Abandonment * New Construction Casing Repair Pull or Alter Casing Change of Plans Shoot or Acidize Conversion to Injection Vent or Flare Fracture Treat Water Shut-Off Other					
Approximate Date Work Will Start	Date of Work Completion Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form. ** Must be accompanied by a cement verification report.					
**S. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) MIRU Aztec 222. Spud 12 1/4" hole between 8-10 P.M., 2-12-92. Drill to 515' +/- RU & ran 12 jts 8 5/8", 241b, K-55, ST&C Csg. Set at 515'. Cement w/370 sx of class 'G'& 2% CaCl2 and 1/4#sk celloflake. Good circulation of cement to surface. Notification of spud by Larry A. Chambers to BLM, recording @ 4:00 P.M. on 2-12-92.						
	oktor ()					

BARRY A.

Title OPERATIONS MANAGER

Date 5-27-93

(State Use Only)

14. I hereby certify that the foregoing in true and correct

Form 3160-5 (June 1990)

UNITED STATES DEPARTMENT OF THE INTERIOR

j

FORM APPROVED Budget Bureau No. 1004-0135 Expires: March 31, 893
Designation and Serut N

BUREAU OF LAND MANAGEMENT). Lesse Designation and Scientific.
Do not use this form for proposals to dr	AND REPORTS ON WELLS ill or to deepen or reentry to a different reservoir. R PERMIT—" for such proposals	NOG 8702-1116 6. If Indian, Allores or Tribe Name Navajo Tribal
SUBMIT IN TRIPLICATE		7. If Unit or CA, Agreement Designation
I. Type of Well Quantum Oil Gas Well Other		N/A 8. Well Name and No.
2. Name of Operator Chuska Energy Company.		Barnes 18M(N) 9. API Weil No.
3. Address and Telephone No. 3315 Bloomfield Highway, Farmington, NM 87401 505-326-5525 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)		43-037-31521 10. Field and Pool, or Exploratory Area
Section 18-T40S-R25E 801'FSL & 1108'FWL (Surface)		Wildcat 11. County or Parish, State
865'FSL & 1495'FWL (Subsurface)		San Juan County, Utah
12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPO	RT, OR OTHER DATA
TYPE OF SUBMISSION	TYPE OF ACTION	
Notice of Intent Subsequent Report	Abandonment Recompletion Plugging Back	Change of Plans New Construction Non-Routine Fracturing
Final Abandonment Notice	Casing Repair Altering Casing Other Spud/Surface Casing	Water Shut-Off Conversion to Injection Dispose Water
	Il pertinent details, and the services dates, including estimated date of starting depths for all maken the zones pertinent to this work it.	(Note: Report results of multipre competition on Art.) Completion or Recompletion Report and Log form (g any proposed work. If well is directionally delied.
MIRU Aztec 222. Spud 12 1/4" RU & ran 12 jts 8 5/8", 241b, of class 'G' & 2% CaCl2 and 1	Total between 8-10pm, 2-12-92. Drill K55, ST&C Csg. Set at 515'. Cement of the sk celloflake. Good circulation and by Larry A. Chambers, to BLM, Record	to 515'+/- t w/ 370 sx of cement to
	ACCEPTED FOR RECORD FEB 1 1 1930 FARMINGTON RESOURCE AREA	73.10:28 16.41a. 73110:28 34.4 31.0

2-13-92 Operations Engineer Title (This space for Federal or State office use)

OPERATOR



United States Department of the Interior

IN REPLY REFER TO

3162.3-4 (019) NOG-8702-1116 (NC)

BUREAU OF LAND MANAGEMENT

Farmington Resource Area 1235 La Plata Highway Farmington, NM 87401

43-037-31521

MAR. 1 9 1992

Chuska Energy Company 3315 Bloomfield Highway Farmington, NM 87401

eco n



Dear Sir:

The following surface rehabilitation stipulations must be complied with as applicable, before the 18M (N) Barnes well located 801' FSL/1108'FWL, Sec. 18, T. 40 S., R. 25 E., lease no. NOG-8702-1116 can be approved for final abandonment (see 43 CFR 3162.3-4)

- 1. A permanent monument must be cemented in the wellbore. It must be labeled with the operators name, well name and number, legal location, and lease number (see 43 CFR 3162.6).
- 2. All fences, production equipment, purchaser's equipment, concrete slabs, deadman (anchors), flowlines, risers, debris and trash must be removed from the location.
- 3. Any oily soil or fluids must be properly disposed of in an approved disposal area.
- Pits must be filled in and the edges of the pads shaped to conform to the natural terrain.
- Pads must be leveled, dressed up by a maintainer, ripped and disked.
- 6. Access roads must be leveled, waterbarred, disked and blocked off with earthen berms at the junction with the main road and at the entrance to the well pad. Waterbars should be spaced as shown below.

% Slope	Spacing Interval
Less than 2%	200'
2 to 5%	150'
6 to 9%	100'
10 to 15%	50'
Greater than 15%	30'

All waterbars should divert water to the downhill side of the road.

- 7. All disturbed areas will be seeded between July 1 and Sept. 15 with the prescribed seed mix. (Reseeding may be required).
- 8. Notify Surface Managing Agency seven (7) days prior to seeding so they may be present for that operation.

Other Surface Managing Agencies (SMA's) may vary slightly in their restoration requirements. It is your responsibility, as the operator, to obtain surface restoration requirements from other SMA'S. We need to be provided with a copy of these requirements. Any problems concerning stipulations received from other SMA's should be brought to us.

On private land, we should be provided with a letter from the fee owner stating that the surface restoration is satisfactory.

If the rehabilitation stipulations have been completed, please sign below and return this letter to:

Farmington Environmental Protection Staff 1235 La Plata Highway Farmington, NM 87401

If the surface restoration has not yet been completed, notify us by Sundry Notice upon completion. We will schedule an inspection to check the well site after we receive notice from you that the vegetation has become established.

If you have any questions, please contact the Environmental Protection Staff at (505) 327-5344.

Sincerely.

Om Claworth

Mike Pool

For Area Manager

The above mentioned well has been abandoned and the required surface restoration stipulations completed.

	Date
Signed	расе

.E OF UTAH

G. Lo	see Designation and	Serial	Number
NOG	8702-1116		

DIVISION O: JIL, GAS AND MININ	NOG 8702-1116
	7. Indian Allottee or Tribe Name
CHISTORY NUMBER OF THE COMMISSION OF THE COMMISS	Navajo Tribal 8. Unit or Communitization Agreement N/A 9. Well Name and Number Barnes 18 M(N)
2. Name of Operator	10. API Well Number
Chuska Energy Company 3. Address of Operator 3325 Bloomfield Highway, Farmington, N.M. 87401 5. Location of Well 801' FSL & 1108' FWL (Surface)	43-037-31521 X 4. Telephone Number 11. Field and Pool, or Wildcat 505-326-5525 Wildcat
Footage :865' FSL & 1495' FWL (Sub-surfac QQ. Sec. T. A. M. :SW/4SW/4, Sec.18, T40S, R25E	State : UTAH
12 CHECK APPROPRIATE BOXES TO INDICATE NO NOTICE OF INTENT	VINHER DE NOTROE MERON DE COMMENT REPORT
Abandonment	Abandonment * New Construction Casing Repair Pull or Alter Casing Change of Plans Shoot or Acidize Conversion to Injection Vent or Flare Water Shut-Off Other
is Describe Proposed or completed operations (Clearly state all pertilecations and measured and true vertical depths for all markers and zones pertiled depths for all markers and zones pertiled barnes 18M well. The well is to be drilled Barnes 18M(N). Attached is a revised 10 Point Program and a revised Well Location Plat. Chus the last week of February, 1992.	nent to this work.) Ka has changed the sub-surface location of last a directional well under the name are line of the Drilling Plan, a Detailed Drilling

14. I hereby certify that the foregoing is true and correct

BARRY A. WIELAND

Title OPERATIONS MANAGER Date 5-27-93

Form \$160-5 (June 1990)

Approved by Conditions of approval, if any:

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

RECEIVED BLM PORM APPROVED
Budget Buress No. 1004-0135
Expires: March 31, 1993

	Expire	: March	31, 19	93
Lease	Design	1000 and	Serval	No.

8702-1116 6. If Indian, Allonse or Tribe Name

AREA MANAGER

SUNDRY NOTICES AND REPORTS ON WELLS 11:30 AM 11:39 orm for proposals to drill or to deepen or reentry to a different reservoir.

Do not use this form for proposals to dri Use "APPLICATION FOF	ill or to deepen or reentry to a different rese R PERMIT—" for such proposals (1997)	
SUBMIT	IN TRIPLICATE	7. If Unit or CA. Agreement Designation N/A
Type of Weil Oil Gas Weil Weil Other 2. Name of Operator		8. Well Name and No. Barnes 18 M(N)
Chuska Energy Company 3. Address and Telephone No.		9. API Well No. 43-037-31521
3315 Bloomfield Highway, Farmin 4. Location of Well (Footage, Sec., T., R., M., or Survey De	scription)	Wildcat Wilconty or Parsh, State
Township 40 South, Range 25 Eas Section 18: SW/4SW/4	865' FSL & 1495' FWL (Su	b-Surface) San Juan County, UT
12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, F	
TYPE OF SUBMISSION	TYPE OF A	
Notice of Intent Subsequent Report	Abandonment Recombation Number Back Chang Repair	Change of Plans New Construction Non-Routine Fracturing Water Shut-Off
Final Abandonment Notice	Other Name Change and bottom hole location ch	Conversion to Injection Dispose Water Due Report results of multiple completion on the Completion or Recompanion Report and Log form
Following further seismic prog the Barnes 18M well. The well Barnes 18M(N). Attached is a	ram review, Chuska has changed the is to be drilled as a directional revised 10 Point Drilling Plan, ation Plat. Chuska anticipates s	al well under the name a Detailed Drilling
holds	real of this pation does Errant thus the mothernt legal or equivable rights to this lease."	SEP 0 /
14. I hereby certify that the foregoing is true and correct Signed A. T. Rell.	Tide Operations Manager	APPRO443692
(This space for Federal or State office use)		0 F 4000

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictionus or fraudulest statements or representations as to any matter within its jurisdiction.

CHUSKA ENERGY COMPANY

BARNES 18 M(N)
SECTION 18, TOWNSHIP 40S, RANGE 25E
801' FSL & 1108' FWL (surface)
865' FSL & 1495' FWL (subsurface)
San Jua County, Utah

10 POINT DRILLING PLAN

77 9141

SURFACE FORMATION:

Geological name of surface formation: Morrison

ELEVATION:

Surface elevation is 4826' GR/ 4839' KB

ESTIMATED FORMATION TOPS

TD	FORMATION	SUB-SEA ELEV.
889'	Navajo	+3950'
1584'	Chinle	+3255'
2694'	DeChelly	+2145'
2812'	Organ Rock	+2027'
3507'	Cedar Mesa	+1332'
4607'	Hermosa	+232
5531'	Upper Ismay	-692'
5639'	Lower Ismay	-800 Secondary
5699'	Desert Crk	-860'Primary
5861	Akah	-1022
5911'	Total Depth	-1072

4. PROPOSED CASING/CEMENTING PROGRAM

	DEPTH	SIZE	WEIGHT	GRADE	COUPLING
SURFACE PROD.	500' 5,910'	8 5/8" 5 1/2	24.0 ppf 15.5 ppf		STC LTC

SURFACE CEMENTING:

370 sx Class 'G' Cement with 2% CaCl and 1/4 lb/sk Celloflake. Weight = 15.8 ppg, yield = 1.15 ft3/sk. Slurry volume will be calculated at 100% excess over annular volume.

PRODUCTION CEMENTING:

First Stage

TD to 3500' (stage collar @ +3500'). Lead with 311 sx Class 'G' cement, 65:35 Pozmix with 6% gel and 1/4 lb/sk Celloflake. Weight = 12.7 ppg, yield = 1.85 ft3/sk. Tail with 100 sx Class 'G' cement with 2% CaCl2. Weight = 15.8 ppg, yield = 1.15 ft3/sk. Total of 691 ft3 w/ 30% excess.

SECOND STAGE

3500' to surface. Lead with 480 sx Class 'G' cement, 65:35 Pozmix with 6% gel and 1/4 lb/sk Celloflake. Weighat = 12.7 ppg, yield = 1.85 ft3/sk. Tail with 100 sx Class 'G' cement with 2% CaCl2. Weight = 15.8 ppg, yield = 1.15 ft3/sk. Total of 1004 ft3 w/ 30% excess.

NOTE: Exact slurry volumes for the production string will be adjusted according to the caliper log which will be run prior to cementing. Special adjustments may be necessary if significant amounts of salt are drilled.

CENTRALIZERS:

8 5/8" Surface String: Center of shoe jt, jt.3, jt.5, jt.7, and surface jt.

5 1/2" Production String: Center of shoe jtl, jt.2, jt.4, jt.6, jt.8, and every 3rd jt., up to DV Tool @ +/-3500'. Four (4) centralizers through DeChelly and two (2) centralizers @ surface.

NOTE: Put asterik on each pipe tally joint for each centralizer installed.

5. BLOWOUT PREVENTER (SEE ATTACHED SCHEMATICS)

As abnormal pressure is not anticipated, a 2000 psi BOP system would be sufficient for the drilling of this well. However, due to availability constraints, a 3000 psi system will be used, as per attached Exhibits "A" and "B". This will be a 10" x 900 series double ram preventer, equipped with a set of pipe and blind rams.

An accumulator system, with a pressure capacity sufficient to operate the rams three complete cycles without rig power, will be required as part of the rig equipment.

6. PROPOSED MUD PROGRAM

Surface to 3500'

Fresh water, gel, lime and native solids. Weight 8.3 - 8.7 ppg. Gel/lime sweeps are necessary for hole cleaning.

3500' to TD

Low solids, non-dispersed polymer system. Weight 8.6 - 8.8 ppg. Gel/lime sweeps as hole conditions dictate for hole cleaning. Fluid loss to be maintained at 15 cc or less. Fluid loss to be further reduced to 10 cc or less prior to coring, logging or DSTS.

7. AUXILIARY EQUIPMENT

- A. A kelly cock will be installed during drilling operations, with handle available on rig floor.
- B. Full (Opening) Safety (FOSY) valves will be available, on the rig floor at all times, with necessary subs to fit all of the drilling assemblies.
- C. Mud will be the circulating fluid. No abnormal formation pressures are expected.

8. WELL EVALUATION

Open hole electric logging program will consist of a minimum program of DLL-MSFL-SP-GR-Cal, FDC-CNL-GR-Lithodensity from TD - 4000'

Drill stem testing will be as per the wellsite geologists' recommendations, based on shows. A mud logging unit will be utilized during drilling operations from 4000' to TD.

9. ABNORMAL PRESSURES/GAS

Abnormal pressures are not anticipated. Monitoring of gas and hydrocarbon shows will be by wellsite mud logging unit. H2S gas is not anticipated, however, regular checks will be made while drilling the well.

10. TIMING

The drilling and evaluation of this well is estimated be 15 days. Anticipated drilling will be February'92.

DETAILED DRILLING PROGRAM

DATE: January 17, 1992

WELL NAME: Barnes WELL NO.:18 M(N)

LOCATION: Section 18-Township 40S, Range 25E

801' FSL & 1108' FWL (surface) 865' FSL & 1495' FWL (subsurface)

ELEVATION: 4826' GR /4839' KB

TOTAL DEPTH: 5911' KB

PROJECTED HORIZON: Primary Target is Desert Crk @ 5699'

Secondary Target is lower Ismay @ 5639'

DRILLING, CASING AND CEMENTING PROGRAM

 Move in and rig up rotary tools. Notify BLM of time of spud.

- 2. Drill mouse hole and rat hole. Mix mud prior to spudding well.
- 3. Drill 12 1/4" hole to +/- 515'. Use fresh water gel/
 lime spud mud for drilling surface hole. Well bore
 inclination is not to exceed 1 degree at 500'.
 Deviation surveys will be run at least at 250' and
 at casing point.
- 4. Run 8 5/8", 24 lb/ft, K-55, ST&C casing to 515'. Cement with 370 sx (426 ft3) of Class 'G' cement with 2% CaCl2 and 1/4 #/sk Celloflake (sufficient slurry volume to circulate cement to surface.)
- 5. W.O.C. a minimum of 4 hours prior to nippling up for BOP stack and related equipment. See BOP schematics for details.
- 6. Ensure that plug has been down at least 8 hours prior to commencing pressure testing procedures. Pressure test BOP to 2,500 psig for 30 minutes. Pressure test manifold and all related equipment to 2,500 psig. Pressure test casing to 2000 psig for 30 min.
- 7. Drill out surface casing with 7 7/8" bit. Drill 7 7/8" hole to TD. Deviation surveys are to be taken every 500' or on a bit trip, whichever occurs first.

- 8. Run open hole logs and evaluate. Coring and/or drill stem testing will be as per well site geologist's recommendation.
- 9. If the well is determined to be productive run 5 1/2" casing to TD., as per casing program in 10 Point Drilling Plan. Set stage cementing collar at +/- 3,500 ft. In addition to placing centralizers over potential production zones, they will also be run to cover the aquifer sands of the Navajo and DeChelly formations, as per BLM stipulations. Cement production casing in two stages as per cementing program in 10-Point Drilling Plan.
- 10. Nipple down BOPE. Set 5 1/2" casing slips and cut off casing. Install well head. Release drilling rig and move rig off location.
- 11. If well is non-productive it will be plugged and abandoned as per State, BLM, and Navajo Tribal stipulations.

Barnes 18 M(N)
Section 18, Township 40S, Range 25E
801' FSL & 1108' FWL (surface)
865' FSL & 1495' FWL (subsurface)
San Juan County, Utah

Difference of the second

GENERAL COMPLETION PROCEDURE:

If the well is determined to be productive, move in completion rig. Perforate, acidize, and test each productive porosity zone. Completion work will commence after Sundry Notice approval is received. Detailed procedures will follow.

PLUGGING AND ABANDONMENT:

If the well is determined not to be productive, the well bore will be plugged as per BLM, State and BIA requirements.

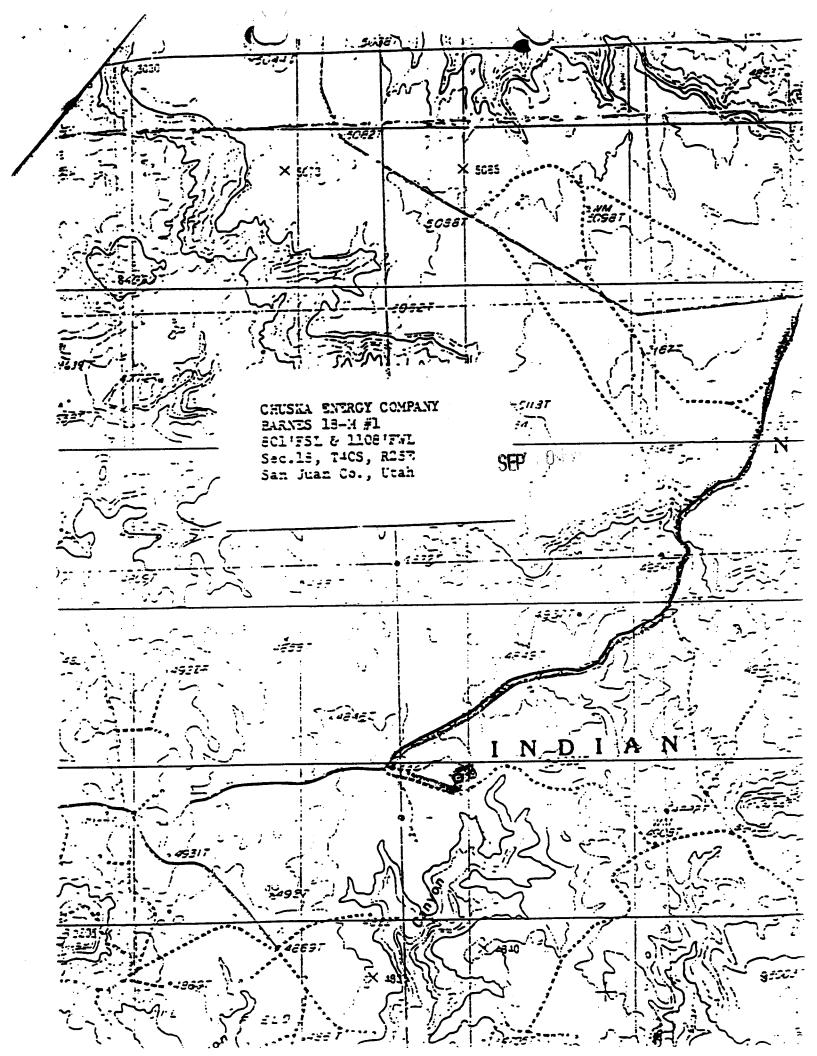
11. OPERATORS REPRESENTATIVE

CHUSKA ENERGY COMPANY 3315 BLOOMFIELD HIGHWAY FARMINGTON, NM 87401 BARRY A. WIELAND

12. CERTIFICATION

I hereby certify that either I, or persons under my direct supervision have inspected the proposed drill site and access route: that I am familiar with the conditions which presently exist: that the statements made in this plan are, to the best of my knowledge, true and correct and that the work planned will be performed by Chuska Energy, or its sub-contractors, in conformity with the terms and conditions under which it is approved.

BARRY A. WIELAND OPERATIONS MANAGER



CHUSKA ENERGY COMPANY BARNES 19-M #1 801'FSL & 1108'FWL Sec.18, T40S, R253 SEP 1 0 1993 San Juan Co., Utah 175 8 F-5! F-12 C-07 125 F-21 LAYDOWN Elev. 45255 Grd d. Gr. 4326 67' C1/5 30 :25 Reserve Pir 40.30' Sours 10 CEES ت 1.11ء 100 260-45' Enst Lac. 15 150' Neate of 52 124.5 Scale: |"='50' A-A Vert.: |" = 30' Hortz.: |" = 100' CAL 4335 1225 8-9' 4535 4325 C-C' 4535

4325

STATE OF UTAH				
DEPARTMEN	* NATURAL RESOURCES			
DIVISION OF	JIL, GAS AND MINING			

DIVISION OF JIL, GAS AND MINI	NG 8702-1116	
SUNDITY NOTES AND FIRST	7. Indian Allottee or Tribe Name Navajo Tribal 8. Unit or Communitization Agreement N/A	
Chuska Energy Company	9. Well Name and Number Barnes 18M \(\) \	
3. Address of Operator 3315 Bloomfield Highway, Farmington, N.M. 8740 5. Location of Well Footage 801' FSL, 1108' FWL	43-037-31521 X 4. Telephone Number	-,
QQ, Sec, T., R., M. :Sec. 18, T40S, R25E CHECK APPROPRIATE BOXES TO INDICATE N NOTICE OF INTENT (Submit in Duplicate)	Chan . IPPALL	
Abandonment New Construction Casing Repair Pull or Alter Casing Recompletion Shoot or Acidize Fracture Treat Vent or Flare Water Shut-Off APD Extension	Abandonment " New Construction Casing Repair Pull or Alter Casing Change of Plans Shoot or Acidize Conversion to Injection Vent or Flare Fracture Treat Water Shut-Off Other	•
Approximate Date Work Will Start	Date of Work Completion Report results of Multiple Completions and Recompletions to different reservoi on WELL COMPLETION OR RECOMPLETION AND LOG form. * Must be accompanied by a cement verification report.	
i3. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinocations and measured and true vertical depths for all markers and zones pertinocations and measured and true vertical depths for all markers and zones pertinocations and measured and true vertical depths for all markers and zones pertinocations and measured and true vertical depths for all markers and zones pertinocations and measured and true vertical depths for all markers and zones pertinocations and measured and true vertical depths for all markers and zones pertinocations and measured and true vertical depths for all markers and zones pertinocations and measured and true vertical depths for all markers and zones pertinocations and measured and true vertical depths for all markers and zones pertinocations and measured and true vertical depths for all markers and zones pertinocations and measured and true vertical depths for all markers and zones pertinocations are considered.	ation, the drilling of this well has been	:8

14. I hereby certify that the foregoing is true and correct

BARRY A. WIELAND

Title OPERATIONS MANAGER Date 5-27-93

(June 1990) DEPARTME	OF THE INTERIOR U D MANAGEMENT	5. Lease Sesignation and Serial Se.
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Use "APPLICATION FO	R PERMIT==" for such proposals	Navajo Tribal
	TRIPLICATE AREA	?. If wait or GA, Agreement Designation
1. Type of Soil Gas Gas	FARMING	S. Tell Suse and Se.
2. Same of Secretor		Barnes 18M 1
Chuska Energy Company		9. API Well de.
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Subsequent toport	Plagging back	☐ Bea-Restime fracturing
·	Casing Ropair	Tator Shet-off
Final Abandonment Motice	Alteries Casies	Conversion to Injection
	Extension APD Extension	Dispose Pater
		(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)
Following further seismic delayed. Chuska Energy the the subject well.	e and geological evaluation, the dril nerefore applies for an extension to	ling of this well has been the approval of the APD on
	SEP 0 1000	
	第二条NAD 2000年(1900年)	111N A 2 1002
	THIS APPROVAL EXI	PIRES JUN 0 3 1992
14. I hereby certify the top large in the and	engliet	47 May 01
Signed	Title Operations Engineer	Pate17 May 91
(This space for federal or State office 650)		
Approved by	Title	Date
Title 18 U.S.C. Section 1001, mates it a crime for fightlions or franchiset statements or corresponding	any person knowingly and willfully to make to any departmen one as to now matter within its jurisdiction.	
	*See Instructions On Reverse Side	3 1991
	OPERATOR	AREA MANAGER



JSKA ENERGY

3315 BLOOMFIELD HIGHWAY . FARMINGTON, NEW MEXICO 87401 . PHONE: (505) 326-5525

17 May, 1991

Bureau of Land Management 1235 La Plata Highway Farmington, New Mexico 87401

ATTENTION: Ron Fellows

Ref:

Sundry Notice: Barnes 18M 1 Well Application for Extension of APD Approval

Dear Mr. Fellows, Attached for your examination and approval are the original and six copies of the subject Sundry Notice.

Please advise if you require additional information concerning this submission.

Sincerely,

SFP **1** 1993

Larry G. Sessions Operations Manager

File: C:\WP51\BARNES.18M\EXAPDSUN.CVR LGS/cswh

enc1.

a ann a UN S	TED STATES	FORM APPROVED
LOLM 3160-3	THE INTERIOR	Sadget Baress So. 1004-0135
(out loss)	LAND MANAGEMENT	5. Lease Designation and Serial So.
BUREAU OF	LAND MANAGEMENT	NOG 8702-1116
	AND REPORTS ON WELLS	8. If Indian, Allettes or Tribe Sees
	Il or to deepem or reentry to a different reservoir.	1
Use "APPLICATION FO	R PERMIT-" for such proposals	Navajo Tribal
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2. Same of Operator		Barnes 18M 1
Chuska Energy Company		9. API Tell No.
J. Address and Telephone So.		43-037-31521
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4. Location of Boll (Footage, Sec., T., R., H., or		Wildcat
0011 FOR 11001 FM 010 TM	no nost	11. County or Parish, State
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12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPO	RT, OR OTHER DATA
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Subsequent Report	Plagging Buck	Boa-Routine Fracturing
	Casing Ropair	☐ Bater Shot-off
Final Abandonment Motice	Altering Casing	Conversion to Injection
	X ether APD Extension	Dissess Bater
		(Note: Report results of multiple completion on Well
		Completion or Recompletion Report and Log form.)
drilled, give subsurface locations and measured and true Following further seismic	ell pertinent details, and give pertinent dates, including estimated date of vertical depths for all merkers and zones pertinent to this work.)* c and geological evaluation, the dril nerefore applies for an extension to	ling of this well has been
	() (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	
LAN /V	Title Operations Engineer	este 17 May 91
Signal Committee and State of the Committee of the Commit		
(This space for federal or State office (se)	9241.	Date
Approved by	Title	YEVY AND SOME



CHUSKA ENERGY COMPANY

3315 BLOOMFIELD HIGHWAY . FARMINGTON, NEW MEXICO 87401 . PHONE: (505) 326-5525

September 7, 1993

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

SEP 1 0 1993

DIVISION OF OIL, GAS & MINING

Attn: Mr. R.J. Firth
Associate Director

RE: Utah Division of Oil, Gas and Mining's Reporting Requirements

Dear Mr. Firth:

Enclosed please find the following reports and well logs run on wells drilled by Chuska Energy Company during the period January 1, 1992 forward. The Production Reports were filed in June under a separate cover letter by our home office, Harken Energy Company, out of Dallas. We have received conflicting statements as to whether or not the data was received. Therefore, a second set of Production reports from January 1992 forward are also forwarded to your office under this cover letter.

APD(S), SUNDRY NOTICES AND ENTITY ACTION FORMS

Barnes 18M Barnes 18M(N) Brown Hogan 1A-2 Burro 33I Clay Hill 33-0 Crane 35H Copperhead 15E D.C. Anticline 35K Heron 35H Heron 35H(A) Jack 31G Kokopelli 29I Lark 19B Lark 19B(G) Lighting Rock 2E Lizard 4M Lone Mountain Creek 12F-1 Monument 17E-2 Mule 31K Mule 31K(N) Mule 31M NW Cajon 1I-1 North Heron 35C Northwest Cajon 6E North Cajon Mesa 5E-1 North Ruins 16K Red Lake 25B Tower 1F Box Canyon 5F Shalene 11K South Triangle 7I West Clay Hill 5B(A)



DIVISION OF OIL, GAS & MINING

LOGS

Barnes 18M(N) Brown Hogan 1A-2 Burro 33I Clay Hill 33-0 Copperhead 15E D.C. Anticline 35K Heron 35H Jack 31G Kokopelli 29I Lark 19B(G) Lighting Rock 2E Lone Mountain Creek 12F-1 Mule 31K(N) Mule 31M North Cajon Mesa 5E-1 North Heron 35C N.W. Cajon 1I-1 N.W. Cajon 6E Red Lake 25B West Clay Hill 5B(A)

If you should have any further questions, please don't hesitate to contact me, or Nell Lindenmeyer, at 505-326-5525.

Sincerely

Barry A. Wieland Operations Manager

Enclosures Well File

(3/89)

OPERATOR	CHUSKA	ENERGY	COMPANY		
ADDRESS _					

OPERATOR	ACCT.	NO.	N 9290

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	N VELL NAME	QQ	YELL TP	N COUNTY	SPUD DATE	EFFECTIVE DATE		
A	99999	11548	43-037-31518	NORTH RUINS 16L-1	NWSW	sc 16	40S	RG 25E	SAN JUAN	DATE	10-19-93
ELL 1 C	OMMENTS:	<u> </u>	<u> </u>		!	<u>!</u>	.!	·	<u>!</u>		
				n 1.		,					;
A	99999	11549	43-037-31552	MONUMENT 17L-3	NWSW	17	40s	25E	SAN JUAN		10-19-93
IELL 2 C	OMMENTS:	······································	 + + + + + + + + + +			•	·•	· '	<u>'</u>		
				land.							
A	99999	11550	43-037-31521	BARNES 18M #1	SWSW	18	40S	25E	SAN JUAN		10-19-93
IELL 3 C	OHMENTS:	.!					1	.1			
				.] .							
A	99999	11551	43-037-31553	MONUMENT 18H #2	SENE	18	40s	25E	SAN JUAN		10-19-93
ELL 4 C	OMMENTS:								· · · · · · · · · · · · · · · · · · ·		
				1							
A	99999	11552	43-037-31496	BIG BEND 7A-1	NENE	7	40s	26E	SAN JUAN		10-19-93
√ELL 5 C	OMMENTS:	···	 		~ ~~~~	·		· i · · · · · · · · · · · · · · · · · · 			
				· ~					^		
ACTION CODES (See instructions on back of form) A - Establish new entity for new well (single well only) B - Add new well to existing entity (group or unit well)								L. CORDOVA (Signature	(DOGM)		
C — Re-assign well from one existing entity to another existing entity D — Re-assign well from one existing entity to a new entity E — Other (explain in comments section)									ADMIN. ANALY	ST	10-19 Date
NOTE: Use COMMENT section to explain why each Action Code was selected.								Phone No. (1		